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NEWS SUMMARY

Sands supporters take to streets as MP weakens

Supporters of H-block hunger striker Bobby Sands took to the streets in West Belfast in one of the biggest Republican demonstrations since the campaign for special category status started four year ago.

Provisional Sinn Fein estimated the crowd at between 25,000 and 35,000. The march passed off peacefully apart from a brief outbreak of stoning.

Sands' sister Marcella led the march to a rally addressed by former Ulster MP Bernadette McAliskey.

In London, fighting broke out between police and about 500 supporters of Sands who gathered outside Kilburn tube station.

The rally, organised by the H-block and Armagh National Committee, was to march to a picket in Downing Street, but police tried to keep it stationary, to comply with Mr. Whitelaw's 28-day ban on marches.

There were violent clashes in which several demonstrators were injured, and 32 arrested. A further six were later arrested at Downing Street.

Three convicted IRA men climbed on to the roof of Wormwood Scrubs to stage a demonstration in support of Sands.

Sands, the MP for Fermanagh and South Tyrone, is in the 58th day of his hunger strike. Doctors are now in constant attendance. Page 4.

A Merseyside MP escaped injury after receiving a letter bomb through the post.

Barry Porter, Conservative MP for Bebington and Ellesmere Port, believes the device was sent by Sands supporters.

GENERAL

Blizzards hit farm crops and lambing

Farmers feared many lambs may have died in the worst April blizzards this century, which have also hit fruit and vegetable crops.

Five teenagers were last night missing in a Dartmoor blizzard, and gale-force winds created havoc around the coast.

Many homes were without electricity after power lines came down. The forecast is for gradual thaw from lunchtime. Back Page

...rport action

Severe air traffic disruption at Heathrow and provincial airports is expected as civil service unions continue their action over pay. Back Page

Move on fares

The European Commission is preparing powers intended to break the high fares cartel operated by Europe's state-owned airlines. Back Page

Humberside link

Eastern Airways starts a twice-daily DC-3 Dakota service between Humberside and London. Page 5

Curb on racism

Metropolitan Police Commissioner Sir David McNee pledged that any police officer showing racialist tendencies would receive "swift disciplinary action."

Scottish news

The Sunday Standard, Scotland's new quality paper, was launched with a front-page story on Soviet spies "still operating in Whitehall." Page 4

Food prices up

Food prices continued their steady upward trend in April, according to the FT Grocery Prices Index. Page 5

Sheep killer hunt

Cumbria police are searching for a gunman who slaughtered 25 sheep and injured four at Whinfell, near Cockermouth.

No celebrations

Tanzania decided it cannot afford to celebrate its 20th anniversary of independence from Britain.

Hard luck

A casino opened in Budapest's Hilton Hotel, Hungary's first since it became a Communist state. Only foreigners with hard currency can play.

BUSINESS

Thatcher seeks Gulf export drive

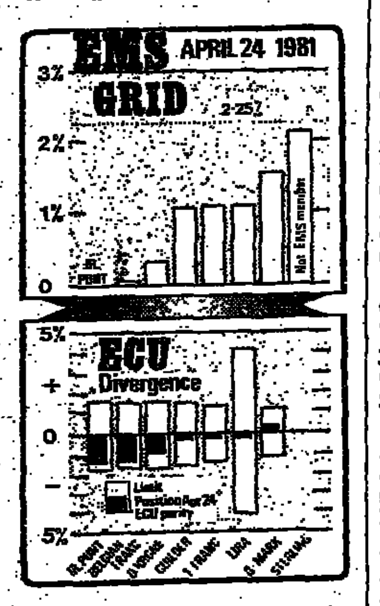
● PRIME MINISTER wants closer links between the Government, industry and banks to stimulate exports to the Gulf and India. Back Page; Schmidt's Saudi visit, Page 2 and Lombard, Page 12

● MANPOWER SERVICES Commission will meet tomorrow in an effort to approve proposals to transform Britain's industrial training arrangements. Back Page

● ROLLS-ROYCE signed a deal to supply its military Spey engine for the AMX, a new Italian-Brazilian fighter aircraft. Page 5

● POWER ENGINEERS' pay talks have run into difficulties over a pay formula seen by the engineers' union as virtually a no-strike agreement. Page 8

● DEPARTMENT OF TRADE is petitioning for the winding-up of Connaught Latham, a Buckingham-based licensed securities dealer.



The chart shows the two constraints on European Monetary System exchange rates. The upper grid, based on the weakest currency in the system, defines the cross rates from which no currency (except the lira) may move more than 2¼ per cent. The lower chart gives each currency's divergence from its "central rate" against the European Currency Unit (ECU), itself a basket of European currencies.

● IRISH punt replaced the Belgian franc as the weakest member of the European Monetary System at the end of last week. The punt was slightly firmer overall against its EMS partners, but fell to the bottom of the system because of a sharp improvement by the Belgian franc.

The Belgian currency showed no adverse reaction to the cut in Belgium's discount rate just before Easter. Strongest EMS currency was the D-Mark again.

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Giscard and Mitterrand in straight fight for French presidency

BY ROBERT MAUTHNER IN PARIS

PRESIDENT VALERY Giscard d'Estaing and M. Francois Mitterrand, his Socialist challeneger, led the field in the French presidential elections' first round and will fight a straight duel in the final ballot on May 10.

All candidates except the first two are knocked out in the first round, under the French voting system. As many as 10 candidates were running in the election yesterday.

M. Giscard d'Estaing topped the list of candidates with 28.3 per cent of the votes cast, according to the first computer projections given by the SOFRES public opinion poll and broadcast by TF 1, the first television channel. Another prediction made by AFP, the French news agency, gave the outgoing president 28.9 per cent.

M. Mitterrand had 25.2 per cent, giving a gap of about 3 perecentage points between the leading candidates. The last pre-election polls estimated it at least half a point bigger than that.

M. Jacques Chirac, the Gaullist candidate, came third with 17.9 per cent. M. Georges Marchais, the Communist leader, was fourth with 16.5 per cent, according to the television projections.

One of the first round's most striking results is that both M. Chirac and M. Marchais have done much worse than expected. The crystalisation of votes on the two main right-wing and left-wing candidates appears to have been much greater than usual in the first ballot, when people tend to vote without necessarily having the final result in mind.

M. Chirac has made up a lot of ground since the beginning of the campaign, when he was credited with about 10 to 12 per cent of the votes by the opinion polls. However, he has not made the breakthrough the pundits thought he was capable of on the eve of polling. A number of observers even predicted he would overtake M. Mitterrand for second place.

M. Marchais, too, will be disappointed. His estimated 16.5 per cent is the worst registered by the Communists in any election since 1936. In practice, this will mean the Communists will have much less of a hold on M. Mitterrand, if the latter wins the election in two weeks.

M. Giscard d'Estaing has performed much as expected, but not nearly as well as in the first round of the 1974 Presidential election when he obtained 32.6 per cent. It is clear he will have a tough fight to beat M. Mitterrand in the final ballot, particularly as he cannot be sure of the backing of all Gaullist voters.

M. Brice Lalonde, the ecologist candidate, led the rest with 3.7 per cent, according to first computer estimates. Mlle. Arlette Laguiller, the Trotskyist candidate followed with 2.3 per cent, M. Michel Crepeau; the left-wing Radical, with 2.1 per cent, M. Michel Debre, independent orthodox Gaullist, with 1.7 per cent, Mme. Marie-France Garaud, independent, with 1.3 per cent, and Mme. Huguette Bouchardeau, left-wing Socialist, with 1.0 per cent.

The rate of abstention was 19.3 per cent, according to the computer predictions, four percentage points higher than in 1974's first round.

The voters went to the polls in generally bad weather, which probably explains the relatively smaller turnout than in most of the recent presidential and parliamentary elections. In hilly and mountainous areas, such as the Masif Central, the Alps and the Pyrenees it was snowing.

Voting took place in a calm atmosphere. The only serious incident reported early yesterday evening was at the Channel port of Le Havre, where the windows of the Communist Party's local offices were broken.

Nine of the ten presidential candidates voted before lunchtime. M. Mitterrand, true to form, did not arrive at the polling station in Chateau-Chinon, of which he is mayor until well into the afternoon. He made up for his tardiness by voting twice, on behalf of himself and by proxy on behalf of a woman in hospital.

Men and Matters, Page 14

Benn campaign is a challenge to Foot

BY MARGARET VAN HATTEM AND NICK GARNETT

MR. TONY BENN launched his campaign last night for the deputy leadership of the Labour Party, just after Mr. Michael Foot, the party Leader, made an impassioned plea for him to stand down.

Speaking at packed fringe meetings arranged by his supporters at two union conferences Mr. Benn focused his appeal on the need for "greater democracy in the Labour Party," though he did not explicitly ask for support in his bid for the deputy leadership.

But by making what were clearly campaign speeches, he directly challenged the authurity of Mr. Foot.

Mr. Benn was speaking at meetings at the Union of Shop, Distributive and Allied Workers and the Association of Professional, Executive, Clerical and Computer Staff conferences.

He said a democratic Labour movement would be unstoppable and appealed for a new emphasis to the spread of democracy in the movement.

It was his first direct appeal to trade unions, which he has to win round to his campaign to oust Mr. Denis Healey.

However, the Apex Conference is expected to support today an emergency motion from the Executive backing the collective leadership of Mr. Foot and Mr. Denis Healey.

The USDAW executive, which originally sponsored the 40/30/30 formula, may recommend support for Mr. Foot's plan to give MPs a 50 per cent share of the vote. Taking up the anti-Benn campaign at the USDAW conference in Blackpool, Mr. Peter Shore, the Shadow Chancellor, warned delegates that confirmation of the Wembley decision would "inflict so deep a wound upon ourselves and so much damage to our electoral prospects that it will take years and years, if at all, before we can hope to recover."

Earlier at the APEX conference in Southport Mr. Foot avoided naming Mr. Benn.

But he said any challenge to the leadership or deputy leadership this year "would plunge the party into a fresh bout of internal debates," further confusing an electorate which might already have doubts about "the unity and continuity of the Labour movement."

"When the party decided on a new system of electing the Leader and the deputy leader, it was never the idea that there should be a contest every year," he said." "That would be a pretty wearing business from which only our enemies in the Conservative Party, in the Press would benefit.

"I still think it would be better if there were no contests."

In opposing Mr. Benn's challenge to Mr. Denis Healey, the present deputy leader, Mr. Foot claimed the support of many trade union leaders and the great majority of the Parliamentary Labour Party.

Under the electoral formula agreed at last January's Wembley conference these

Continued on Back Page

Soviet Union may seek extra U.S. grain

BY DAVID SATTER IN MOSCOW

THE SOVIET UNION, suffering its worst food shortages for more than 20 years, may want to buy an extra 2m to 5m tonnes of U.S. grain this year after the lifting of the U.S. grain embargo, Western agricultural experts said yesterday.

The embargo cut off 17m tonnes of U.S. grain the Soviet Union expected to import last year and has worsened the effect of two successive bad grain harvests.

The Soviet Union made up a large portion of the embargoed grain by buying from other suppliers, particularly Argentina. In the 1980-81 agricultural year, it was still left with only 110m tonnes of feedgrain, 13 per cent less than the 126m tonnes in 1979-80.

After the embargo was imposed in January 1980, Soviet collective farmers began distress slaughtering of livestock. This lead to shortages in the spring of meat and dairy products throughout the country.

The shortages were believed to have led to work stoppages reported in a number of important industrial cities.

First-quarter production statistics suggest further distress slaughtering has taken place. This could lead to severe shortages of meat and dairy products this spring and into early summer.

The prospect of a worsening food situation may prompt the Soviets to start buying as much extra feed as the ports can handle.

A mild winter has left Soviet winer grains in relatively good condition, but prospects for a good harvest have been diminished by unusually cold April weather. This has hampered fieldwork and cut the growing season.

The Soviet Union may need to import again large quantities of foreign grain, perhaps as much as 20m to 25m tonnes, unless this years harvest is successful.

There is no certainty over whether the Soviet Union and the U.S. can negotiate a five-year grain purchase agreement to replace the one providing for Soviet imports of 8m tonnes a year for five years which expires on September 30. It was not abrogated when the embargo was imposed.

Officials told a visiting U.S. congressman that the Soviet Union would insist that any future agreement must contain financial guarantees against any future political embargo.

Reagan trades grain embargo for votes, Page 2
Kremlin approves Polish farmers union, Back Page

Petrofina UK moves into coal

BY RAY DAFTER, ENERGY EDITOR

THE UK ARM of Petrofina, the Belgian oil major, is moving into the British coal market through acquisition of two companies, one partly owned by the National Enterprise Board.

In a unique move which will be watched by other oil companies, Petrofina UK is buying coal distribution interests and a boiler contractor to supply industries considering switching their energy means from fuel oil to coal.

The deals are thought to involve an initial investment of about £3.5m.

Sir Keith Joseph, the Industry Secretary, has consented to one takeover involving Energy Equipment Company of Leighton Buzzard, Beds. The company, which has been developing its own fluidised bed technology, is 43 per cent owned by the National Enterprise Board.

When the deal is completed Energy Equipment will become a wholly-owned subsidiary of Petrofina UK and be established as the centre of the group's coal-burning expertise. Energy Equipment, which traded last year at a loss, has an annual turnover of some £5m.

As part of the package Petrofina UK has bought the controlling interest of Hercock Simpson Holding Company of Leicester, a company with £28m annual turnover and interests in coal distribution, fuel oil distribution — it is an authorised Petrofina distributor — international haulage, building contracting, and ash disposal.

Petrofina, which already held a 25 per cent stake in the company, has raised its shareholding to 76 per cent and has the option to take 100 per cent control within five years.

Mr. Pierre Jungels, managing director of Petrofina UK, said yesterday that the deals were "a logical move in the field of energy distribution."

The company, which held a 3.5 per cent stake in the UK heavy fuel oils market, had seen the overall demand for fuel oil drop dramatically as a result of the economic recession and the growing interest of industry in coal burning.

As a result of a £152m investment shared with the French company Total at the Lindsey Oil Refinery on Humberside, Petrofina was reducing its heavy fuel oil capacity and increasing its ability to manufacture lighter, more valuable products.

A cracking unit now being brought on stream at Lindsey will reduce Petrofina's annual fuel oil availability at present about 1.8m tonnes a year, by about a half.

"The reduction in the availability of fuel oil and the undisguised fact that a lot of our industrial customers are thinking of switching to coal are the driving mechanism behind these deals," said Mr. Jungels.

"Furthermore, as the distribution of oil products is not particularly profitable we have to find new avenues and contributors to our overheads."

Petrofina UK barely broke even last year on a turnover of £430m. As with other oil-refiners and marketers, the company was hit by the sharp drop in demand for oil products.

Mr. Jungels said it was possible that Petrofina UK would offer a package deal to companies considering a switch from oil to coal.

As a result of the takeovers the group could give technical advice on boilers, instal the necessary facilities and provide the coal. It is a concept being canvassed for the first time by an oil company in the UK.

The 250 staff at Hercock Simpson and Energy Equipment are not expected to be affected by the takeovers.

It is likely that Petrofina UK will inject research and development funds into Energy Equipment to enable the company to develop its fluidised-bed boiler, which can be fed with coal and some other combustible materials.

Evidence grows of recession flattening

BY PETER RIDDELL

MORE EVIDENCE that the recession has flattened out is likely to be provided tomorrow in the Conferedation of British Industry's quarterly trends survey. But there are apparently no signs of any increase in activity.

The survey, which is wider ranging than the monthly trends inquiry, is expected to confirm the cautiously optimistic comments about the economy made by CBI leaders just before Easter.

There will be close interest in the detailed results of the survey in view of the other signs that the very sharp fall in output has come to an end.

Until recently the CBI line, based on its trends surveys, was merely that the rate of deterioration was slowing down. The change in emphasis first became apparent after the CBI council meeting on April 15 when Sir Ray Pennock, its president, said the recession was flattening out. This change is likely to be reflected in the survey results.

There is no evidence of any general pick-up in activity. CBI staff forecasts have suggested that the economy may bounce along the bottom for some time, with a slight fall in output possible in the short-term. This compares with ministerial hopes that output will be on a rising trend over the coming 12 months from its current low point.

Economists see yet more gloom

BY PETER RIDDELL, ECONOMICS CORRESPONDENT

CONVENTIONAL economic policies, including reflation and devaluation, can no longer rescue the economy from its current "appalling condition," a group of Cambridge University economists headed by Professor Wynne Godley claim today. The prospect is for a "continuing slump" if present policies are maintained.

There is now no alternative to import and exchange controls in order to sustain recovery on a scale to bring unemployment down while keeping inflationary pressures within tolerable bounds and holding the balance of payments position.

The Cambridge Economic Policy Group's annual review presents an extremely gloomy analysis of the prospects under the present economic strategy and argues that the mistakes began under the last Labour Government. It is also notably critical of the main orthodox alternatives on offer.

If the present economic strategy persists, it says, output will continue to fall over the next few years and unemployment will rise to nearly 4.5m by the mid-1980s.

The recession might be temporarily steadied by a slower run-down of stocks or a drop in personal savings. But after these once-and-for-all effects the decline in output is expected to continue.

Total output, as measured by real Gross Domestic Product, is projected to decline by more than 8.5 per cent between 1980 and 1984. This compares with a rise of 3.75 per cent per cent over the period projected by the broadly monetarist London Business School.

Of the conventional alternatives, the Cambridge group argues that reflation without major and sustained devaluation of sterling is impossible and would lead to a very large current account deficit on the balance of payments.

"Devaluation, the only orthodox policy which has any plausibility at all, is unlikely to halt the rise in unemployment this side of 3m and will stoke up inflationary pressures even in the midst of recession."

Consequently, "within the range of what could conceivably be described as conventional policies, there is no longer any strategy left which could now rescue the economy from the appalling condition to which it has been brought by the policies followed since North Sea oil came on stream."

The review is also dismissive of suggestions that the current squeeze will have any longer-lasting favourable impact on wage-bargaining or on the structure of industry.

The Cambridge economists argue that evidence from the early 1970s suggests that redundancies and closures result in a contraction of the industry in question and are not a first step on the road to recovery.

The latest review may also have a major impact on the growing debate within the Labour Party about possible alternatives to the Government's present policy. While Prof. Godley is not politically committed, the group's thinking has influenced the Labour Left

Moreover, its latest criticism of a devaluationist approach contrasts with the strong advocacy of a big fall in the value of sterling by an active group of Labour MPs and economists.

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Mexico warns Washington of 'sweeping penalties'

BY WILLIAM CHISLETT AND REGINALD DALE IN MEXICO CITY

MEXICO HAS warned the Reagan Administration that it is considering imposing sweeping trade penalties against the U.S. if Washington does not show greater sympathy for Mexico's special economic and commercial problems.

The tough new Mexican line has been privately communicated to U.S. officials in advance of the postponed summit meeting between President Ronald Reagan and President Lopez Portillo, now due to take place in June.

It reflects both Mexico's resentment at what it sees as American indifference to its status as a developing nation and the country's growing self-confidence as the world's fifth largest oil power.

The "sanctions" under consideration would involve a major switch of Mexican imports away from the U.S. in favour of other Western countries and Japan, which, it is said here, are prepared to pay an extra economic or political price for access to the Mexican market and Mexican oil.

The U.S. is by far Mexico's biggest trading partner, accounting for some two-thirds of Mexican imports and exports last year.

Most specifically, the suggestion is that Pemex, Mexico's state-owned oil corporation, would in future give priority to buying oil rigs and equipment from countries such as Norway and Britain rather than the U.S.

Food supplies would be sought from Argentina, Canada and New Zealand—in the hope of slashing the more than $2bn import bill that Mexico paid the U.S. to help feed its exploding population last year.

Washington's attitude to Mexico's trade problems is considered here to be far the most important issue for the forthcoming summit. Last year, Mexico's trade deficit with the U.S. rose to $2.6bn (£1.2bn) despite increased oil sales, according to U.S. figures.

Mexican officials still hope that relations between the two countries, also recently soured by a fishing war, can be sufficiently restored to head off a major trade showdown.

There may well also be an element of bluff in the unprecedented Mexican attempt to exert this kind of trade pressure on Washington. Certainly, President Reagan has insisted that he wants to improve U.S.-Mexico relations.

Japanese urged to send fewer cars to U.S.

JAPAN'S car industry has been asked by the Government to send fewer cars to the U.S., Reuter reports from Tokyo. Mr. Rokusuke Tanaka, Minister for International Trade and Industry, is reported to have asked the industry's leaders to set voluntary limits on their 1981 exports to their largest market.

The industry was warned that it faced the alternative that an increasingly protectionist U.S. Congress would do the job for them.

Mr. Takashi Ishihara, president of the Nissan (Datsun) motor company, said after meeting the minister that the industry was standing by its proposal to hold shipments to the same level as 1980—1.82m cars capturing a fifth of the U.S. market.

China-India talks

CHINA'S Foreign Minister, Mr. Hua, is to visit India in June for talks with his Indian counterpart, Mr. P. V. Narasimha Rao, K. K. Sharma reports from New Delhi. The talks will concern normalisation of relations

Vietnamese poll

Vietnam's voters went to the polls yesterday to elect a 496-seat National Assembly which, under a new constitution will have more decision-making powers than its predecessor, Kathryn Davies reports from Ho Chi Minh City.

Israel, Syria in Lebanon attacks

BY IHSAN HIJAZI IN BEIRUT

THE CRISIS in Lebanon worsened yesterday with heavy fighting between Syrian peacekeeping forces and right-wing Christian militia, while in the south of the country Israeli warplanes launched a sustained attack on Palestinian bases.

Witnesses in the port of Sidon said 12 Israeli fighters made a total of eight bombing runs on the eastern and northern suburbs of the Mediterranean city, killing or wounding 18 people.

A military official in Tel Aviv said the raids were mounted "to prevent guerrilla raids into Israel."

In Lebanon's other war, for control of the strategic Bekaa valley, Syrian helicopter-borne troops took part in an assault on Christian militia positions in hills north of the town of Zahle, which has been under siege by the Syrians for the past 25 days.

President Assad

The Lebanese Foreign Minister, Mr. Fuad Butros, held talks in Damascus with President Hafez Assad in a bid to resolve the month-old crisis.

The main battle centred round a fortress built by the French during their mandate in Lebanon which ended with independence in 1943. The fortress, known as the "French room," is situated on Mount Sanin and overlooks the entire Bekaa Valley as well as the north-western mountain range regarded as the Maronite Christians' heartland.

It is feared that the violence could spill over to the hills of the Maten district and the town of Bekfaya. That is the homehown of the Gemayel family, which leads the right-wing predominantly Christian Phalange Party.

Syria has several objectives in its latest campaign. Control of the Sanin hills would remove any threat to the Bekaa Valley, which Damascus regards as vital to Syrian security.

The Syrians also appear to be seeking to re-establish the balance of power which they upset when they entered Lebanon in 1976. The Syrian forces then drove Lebanese Moslem and Left-wing forces out of the Sanin Hills from which they were threatening the Christian port of Jounieh.

Louis Fares reports from Damascus: President Assad yesterday called on Jordan to "assume its legitimate role" which was seen as a call for the overthrow of King Hussein. The President also promised unlimited struggle for "the extermination of reactionary forces" in Syria, in particular the Moslem Brotherhood.

OECD notes Turkish progress

BY DAVID TONGE

TURKEY'S economic situation remains difficult, according to a survey published today by the Organisation for Economic Co-operation and Development.

The survey by the Paris-based organisation welcomes the way in which the military Government has continued to open up the economy and has introduced long overdue tax reform. It says the response to official policies has "probably been as good as one could reasonably expect" but warns that there is still a long way to go. Three main areas of progress are noted:

Inflation was slashed from an annual rate of around 130 per cent a year ago to about 40-50 per cent by the end of 1980

Exports and workers remittances had responded well to Government attempts to ensure that the Turkish lira maintained a realistic value. As a result Turkey's financing gap for 1981, initially forecast at $2bn (£929m), might fall to $1.6-$1.8bn.

The OECD suggests that there has been a recovery of industrial output. This is questionable, however,

Schmidt begins Saudi visit amid arms row

By JONATHAN CARR IN BONN

THE WEST GERMAN Chancellor, Herr Helmut Schmidt, today begins a delicate mission to Saudi Arabia which could have important implications for the German economy and for relations with Israel.

In talks with Saudi leaders including King Khaled, Crown Pirce Fahad and Sheikh Zaki Yamani the oil minister, Herr Schmidt aims to find out how far Riyadh links future economic co-operation with Bonn to delivery of German arms, notably tanks.

German businessmen recently in Riyadh have returned saying a link between arms and civil contracts exists, and that German industry stands to gain orders worth as much as DM 20bn (£4.3bn) annually if Saudi wishes to buy weapons are satisfied.

They also note a downturn in German exports to Saudi Arabia and problems in negotiating long-term oil supply contracts—signs, it is felt, that Riyadh may be holding back on broader co-operation until it receives a pledge of arms.

Bonn is well aware of Riyadh's interest in German weaponry, including the sophisticated Leopard-2 battle tank. But it has received no formal request—let alone a Saudi threat to take business elsewhere if arms are not delivered.

Her Schmidt is thus keeping his options open—hoping that the Saudis will not insist on making arms a crucial element of bilateral relations, but aware that too much is at stake to give a flat refusal if they do.

Saudi Arabia is West Germany's third biggest non-European trading partner. It provides more than one quarter of Germany's crude oil, helps finance the Bonn Government's budget deficit and is likely to be the biggest single source of funds for the recently-announced Franco - German DM 12.6bn loan.

However, West Germany has a restrictive arms export policy, for historical reasons, an dthere is strong opposition among the Bonn coalition parties to a major weapons deal with the Saudis—or any other non-Nato country.

Israel has spoken out strongly against such a deal in advance of Herr Schmidt's departure.

There are signs that the intensity of Israel's complaints have irritated the Chancellor.

Reagan trades the Soviet grain embargo for Senate votes

BY DAVID BUCHAN IN WASHINGTON

PRESIDENT REAGAN has taken one of his most important foreign policy decisions so far—scrapping the grain sales restrictions his predecessor imposed on the Soviet Union in January 1980—for essentially domestic political reasons.

The controversial move shows the overriding importance the President attaches to winning votes for his domestic economic programmes, and his willingness in that cause, to override Mr. Alexander Haig, the Secretary of State, who opposed lifting the grain ban right to the very end.

Mr. Reagan said he had delayed redeeming his 1980 campaign promise to American farmers to remove the embargo in order to make sure that the Soviet Union and other countries would not misinterpret the action as a weakening in American policy.

Not surprisingly the Soviet press immediately read it as just that—and so have a number of U.S. politicians, some of them inside the President's own Republican Party.

A key question is how Europe will read the U.S. move. Although the embargo has been greeted with relief there it remains to be seen whether European allies will view the U.S. Administration any longer as in a position to lecture them about restraining sensitive industrial exports to the Soviet Union.

Mr. Ed Meese, the White House Counsellor who played a central role in the grain decision, went out of his way to say that lifting the embargo was not supposed to convey any kind of a signal to the Kremlin. It was not a gesture towards future arms control talks, nor a truce over Afghanistan, nor a reward for not intervening in Poland.

Since the lifting of the grain embargo was not intended as a gesture, no reciprocal move was sought from the Soviet Union, White House officials said.

The only diplomatic window-dressing the White House attempted was to say that lifting the grain band had been made possible in part by the recent easing of tension in Poland.

More mundance and domestic factors determined why Mr. Reagan—after three months of stalling—acted when he did. American farmers are now planting their spring crops, and lifting the grain ban now would give them the green light to sow more.

That, together with U.S. Government reports this month of improved prospects for the 1981 harvest, would offset any rise in prices from removing the grain ban on the Soviet Union.

The Chicago and New York markets took the news in their stride on Friday.

In fact, imposition and lifting of the grain embargo have coincided harmoniously with market developments. Partial loss of the Soviet market during 1980 mattered less because the U.S. feed-grain harvest, was hard hit by drought and demand from other countries rose.

Likewise, the Russians are now fully back as buyers in a year that looks set for a bumper crop in the American farm belt.

More compelling than this, however, was Mr. Reagan's need to rally support for his economic programme and farm price legislation which have been flagging on Capitol Hill.

President Reagan: Need to rally support.

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Carrington faces problems on Portugal textile exports

BY DIANA SMITH IN LISBON

LORD CARRINGTON, Britain's Foreign Secretary, and Sr. Andre Goncalves Pereira, his Portuguese counterpart, meet in London today for talks on Portugal's application to join the European Community. The issue of *Portugal's textile exports to* the UK is likely to loom large.

Portugal's textile sales to the UK between January and October 1980 were valued at £15m—8 per cent less than in 1979. Textiles represent 30 per cent of all Portuguese exports to Britain, and it appears that exports of T-shirts and other such down-market products from Portugal are worrying British manufacturers, although Portuguese quantities are nowhere near those sold to the UK from the Far East.

The problem is delicate: Britain is perhaps the firmest supporter of Portugal's application to join the Community; no areas of potential friction exist over agriculture, as they do with France and Italy; and Portuguese fishing policies are *very close to Britain's*. Were it not for the struggling textile industries of both countries, *there would be few problems.*

The informal agenda of the talks mainly concerns Portugal's *application to join the Community*, now likely to occur in January 1984, and the intensification of *accession negotiations* during Britain's presidency of the Community in the second half of 1981.

But it is no secret that the Portuguese will feel bound to restate the case for their crisis-ridden textile industry.

On a recent official visit to Portugal, Mr. John Biffen, the British Trade Secretary, indicated that when Portugal joins the Community, it is likely to face a two- to three-year transition period, during which textile exports to the UK would be subject to quotas.

● Taiwan and South Korea have *agreed to wimit footwear export* to France, according to the French Footwear Federation.

The decision follows a visit to the two countries early this month by a French industry delegation.

Footwear manufacturers in both countries have agreed to "*stabilise" exports to France* at the 1979 level without changing the import structure, the Federation said.

Greece buys Leopard-1s

BONN—Krauss-Maffei, part of the Friedrich Flick Industrieverwaltung Group, has won a DM 300m (£64m) *order from* Greece for 106 Leopard I tanks.

The Greek Government has an option on 110 more tanks but could not say when a decision on the option is expected.

The tanks will be delivered between February 1983 and April 1984.

● Two West German companies received orders totalling DM *353m for participation in building* three livestock feed factories in Libya.

Bilfinger und Berger, the West German construction Group, said it received a DM 190m order to construct the plants.

Beuhler-Miag a West German industrial installations company, had received an order valued at DM 163m to supply the electric equipment for the plants.

Agencies.

World Economic Indicators

TRADE STATISTICS

		Mar. '81	Feb. '81	Jan. '81	Mar. '80
France FFr bn	Exports	45.205	46.039	40.838	41.033
	Imports	48.811	49.702	46.743	46.882
	Balance	−3.606	−3.663	−5.905	−5.849
		Feb. '81	Jan. '81	Dec. '80	Feb. '80
UK £ bn	Exports	3.833	4.006	3.999	4.006
	Imports	3.519	3.264	3.646	4.287
	Balance	+0.314	+0.742	+0.353	−0.281
Japan $ bn	Exports	11.850	9.184	14.052	9.384
	Imports	10.370	10.657	11.664	9.612
	Balance	+1.480	−1.473	+2.388	−0.228
U.S. $ bn	Exports	19.764	18.82	19.11	17.20
	Imports	22.910	24.27	22.09	22.80
	Balance	−3.146	−5.45	−2.98	−5.60
W. Ger. DM bn	Exports	30.2	27.3	30.2	29.60
	Imports	29.3	28.2	29.2	29.10
	Balance	+0.9	−0.9	+1.0	+0.50
Netherlands Fl bn	Exports	13.054	12.935	12.931	12.562
	Imports	13.431	11.948	14.108	12.764
	Balance	−0.377	0.987	−1.177	−0.202
		Dec. '80	Nov. '80	Oct. '80	Dec. '79
Italy Lire bn	Exports	7,894	6,047	5,167	7,186
	Imports	9,190	7,454	7,511	8,850
	Balance	−1,296	−1,407	−2,344	−1,664
Belgium BFr bn	Exports	150.470	168.626	168.2	137.8
	Imports	166.234	186.028	186.0	152.6
	Balance	−15.764	−17.402	−17.8	−14.8

China to build oil rigs under licence

Guangdong Shipbuilding has signed a three-year agreement to build oil rigs in China under licence from Bethlehem Steel of the U.S., Reuter reports from Singapore.

The agreement was signed by Bethlehem Steel and Wah-Chang International Marine Industry, a 50-50 joint venture between Guangdong Shipbuilding and Singapore's Wah-Chang International Group.

***The Chinese shipyard will* build an unspecified number of rigs over the three years *and will* export them through the Singapore group.**

Peking software deal

***Nippon Electric signed* an agreement with a Chinese computer firm to set up a *joint software centre in* Peking, Reuter reports from Peking.**

Coal liquefaction plan

A five-company Japanese consortium has set up a wholly owned subsidiary in Melbourne, Australia, to promote a brown coal liquefaction project there, Reuter reports from Tokyo. Brown Coal Liquefaction (Victoria) Pty is to build a pilot plant with daily liquefaction capacity *of 30 tonnes starting in* 1983.

SHIPPING REPORT

Ultra-large oil tanker market improves

By Lynton McLain

THE MARKET for very large and ultra-large crude oil tankers improved towards the end of last week after a period of low activity, poor trading rates and the likelihood that unused vessels would have to be laid-up.

The improvement was reflected in the re-activation of a *number of larger vessels*, previously idle in the Mediterranean, and already being *offered to oil companies for* forward dated business.

A U.S. charterer paid Worldscale 29 at the end of last week for a 310,000 tonne capacity vessel for passage from the Gulf to western destinations. Brokers said this vessel has also been paid $12,750 a day *storage rates, for up to 60 days,* a higher rate than had recently been available.

Very large crude carriers were also being chartered at about Worldscale 30, and owners were more optimistic than for some time that the market would continue its present buoyancy.

Outside the Gulf, however, the market showed no improvement, although a number of contracts were concluded.

On the second-hand market, it is understood that the Eastern Bloc are now seeking *proposals for the purchase of a* substantial number of bulk carriers, form 40,000 dwt tonnes upwards.

Few sales were reported in the second-hand market last week, and the limited activity was in the market for large bulk carriers. China re-emerged as a buyer of vessels and bought the 49,000 dwt tonne Aioba, built in 1970, for $14m.

David Dodwell reports on the 12-man trade delegation to South Korea

UK mission shows its faith in Seoul

A GROUP of senior British industrialists arrived in South Korea yesterday, optimistic that this first top-level trade mission for two years coincides with an upswing in this troubled country's economy.

The mission, led by Mr. Geoffrey Nichols, chairman of the South Korean Trade Advisory Group, can be read as *a statement of faith in South* Korea, a country which capped a decade of dynamic growth in *the 1970s with a traumatic poli*tical and economic reversal.

An official of the group noted: "*The mission comes at the start* of an upward cycle, and is therefore well timed to demonstrate the *continuing interest* by British industry at the highest level in furthering trade with South Korea."

Whether an upward cycle has truly begun is difficult to confirm so soon after the setbacks of 1980. But the comment is no doubt well received in a country whose self-confidence has taken a sharp knock.

Economic growth over the past 20 years has generated a staggering growth in trade. Exports have grown from around $40m in 1961 and $1.1bn in 1971 to $15bn in 1979. Over the same period, imports rocketed from $316m in 1961 to $20.3bn in 1979.

But the economic miracle came to an abrupt end in October 1979 with the assassination of President Park Chung-hee. Most economists see the economic problems since President Park's death as having little to do with the assassination, although the shock this created cannot be discounted.

Rather, the economic reversal was an inevitable consequence of over-ambitious growth in the 1970s. Add to this South Korea's dependence on imported oil and the deep recession in many Western countries. — South Korea's main trading partners —and the roots of the economic troubles have been unearthed.

In 1980, gross national product shrank by 5.7 per cent, with stagnant domestic sales and a fall in exports. The import bill, inflated by oil costs, grew fast enough to widen the current account deficit to about $6bn. At the same time invisibles—largely income from construction work in the Middle East—declined.

Wholesale price inflation is understood to have reached 45 per cent—in part because of a 20 per cent devaluation of the won in January 1980. Wages rose by 33 per cent, and in fact have risen by an average of 16 per cent in real terms since 1977. With productivity growing at just 9 per cent, South Korea's competitive position against such countries as Taiwan, Singapore and Hong Kong has been eroded.

The results are predictable. In a December survey of 86 Japanese countries, South Korea was rated the least desirable site for new investment among the nine fastest-growing Asian nations. Japan accounts for 59 per cent of direct foreign investment in South Korea.

In the first three months of 1981, the Seoul Government approved only $3.5m of investment. The annual average over the past five years is $114m.

At the same time, there are signs of recovery, and these signs have encouraged the 12-man British trade misssion as they begin a heavy seven-day schedule of talks and visits.

The quarterly economic report from the British Embassy in Seoul notes targets of 5 to 6 per cent growth in 1981, with inflation slowing to 25 per cent, greater currency stability, and rising exports.

"First quarter figures have generally, though hesitantly, supported these hopes," the report says. "With stable oil prices and a good harvest, the targets should be attainable."

It also notes, however, that much of industry is operating far below capacity and that new investment demand is not expected to recover until the autumn.

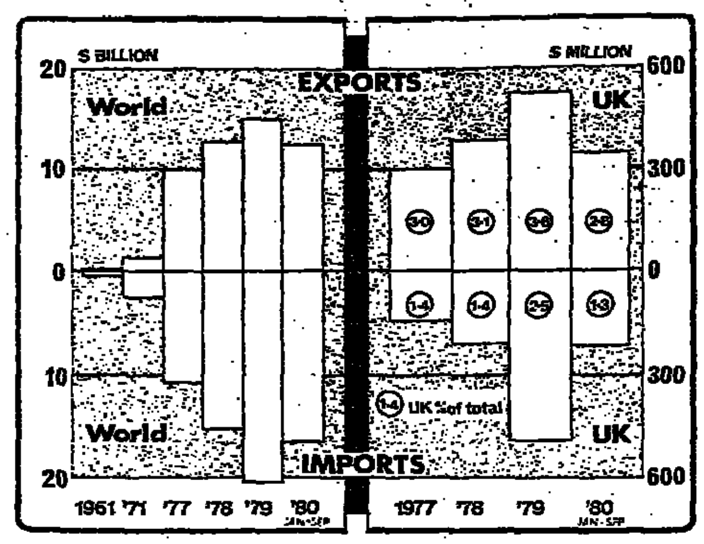
Britain has only a tiny share of South Korea's trade. More than 29 per cent of South Korea's exports go to the U.S., while 22 per cent go to Japan. In 1979, Britain took just 3.6 per cent of South Korea's exports ($542m), and the share is understood to have fallen still further, to 2.8 per cent, in 1980 (about $480m).

British exports to South Korea are on a similar scale—between 2 and 3 per cent of the total.

But there seems a growing belief in South Korea that the economy relies too heavily on just two export market—Japan and the U.S. This has led to talk of a need to boost trade with Europe, and there is every reason to believe that the British mission is well timed.

Few members of the group, which includes directors from Sears, Vickers, GEC, British Aerospace, the Coal Board, Blue Circle, Westinghouse and Davy, have specific business in mind.

But the areas in which they can have hopes of winning business are extensive.



SOUTH KOREAN EXPORTS AND IMPORTS (WORLD AND UK)

Talks on 'Japanese VW'

BY RICHARD HANSON IN TOKYO

WORKING-LEVEL talks began in Tokyo last week between Nissan Motor and Volkswagen on a proposal to build a VW car in Japan.

This is the first such mission from West Germany to arrive since the two motor companies said in December last year that they would study the idea of producing over 10,000 VWs a month at a Nissan plant.

Nissan said it would handle sales within Japan under the arrangements while VW would be responsible for exports from Japan.

The companies expected to work out the details by June this year. The West Germans are expected to stay in Japan for less than a month.

COMPANY NOTICES

SELECTED RISK INVESTMENTS S.A.

NOTICE OF ANNUAL GENERAL MEETING OF SHAREHOLDERS

The Annual General Meeting of shareholders of Selected Risk Investments S.A. will be held at its registered office at *10, Boulevard Roosevelt, Luxembourg,* at 11 o'clock a.m., on 15th May, 1981, for the purpose of considering and voting upon the following matters:

1. To accept the Directors' and Auditor's *reports and to approve the financial* statements for the year ended 31st December, 1980.
2. To approve the appropriation of the net profit to declare a dividend for *1980 of US$0.25, as recommended* by the Board, and fix its date of payment.
3. To discharge the Directors and the Auditor from their responsibilities for all actions taken within their mandates during the year 1980.
4. To ratify the co-optation as Directors of Messrs. Akira SHIMIZU, David R. STEVENS and J. Arthur URCIUOLI.
5. To fix at US$4,000 per annum the Chairman's emolument and at US$2,500 per annum each the other Directors' emoluments for 1981 and subsequent years until otherwise resolved.
6. To fix the Auditor's fees for 1980 at FB 350,000—and to elect the Auditor for 1981.
7. To confirm the appointments and the remuneration of the investment advisors for 1981.
8. To decide on any other business which may properly come before the meeting.

Each of the resolutions set out above may be passed by a simple majority of the votes cast thereon at the meeting.

The shareholders are advised that no quorum for the statutory meeting is required and that decisions will be taken by the majority of the shares represented at the meeting, with the restriction that no shareholder, either by himself or by proxy, can vote for a shareholding in excess of one-fifth of the shares issued or two-fifths of the shares represented at the meeting.

In order to participate in the statutory meeting:

—the owners of bearer shares must deposit their shares, not later than 9th May, 1981 either at the registered *office of the Company,* or with any bank or financial institution acceptable to the Company, and the relative deposit receipts must be forwarded to the registered office of the Company: Boite Postale 408, Luxemoburg. The shares will remain blocked until the day after the meeting.

—the owners of registered shares need not deposit their certificates.

Shareholders who cannot attend the meeting in person are invited to send a duly completed and signed proxy form to the office of the Company: Boite Postale 408, Luxembourg.

No director has entered into a contract of significance with the Company.

THE BOARD OF DIRECTORS

10, Boulevard Roosevelt,
Luxembourg.
27th April 1981.

NESTLÉ S.A.

Cham and Vevey (Switzerland)

THE 114TH ORDINARY GENERAL MEETING OF SHAREHOLDERS is to be held at 3.00 p.m. on Thursday, 14th May 1981, at the "Palais de Beaulieu" LAUSANNE (SWITZERLAND).

AGENDA

1. Address by the Chairman of the Board of Directors.
2. Modification of the Articles of Association.
3. Approval of the Accounts for 1980 and of the Annual Report.
4. Release from responsibility of the Board of Directors and of the Management.
5. Decision regarding the appropriation of the net profit.
6. Elections in accordance with the Articles of Association.

The owners of bearer shares may obtain their cards giving *admission to the general meeting (with a proxy) at the Company's* Transfer Office in Cham up to Monday 11th May 1981 at noon, at the latest. The cards will be delivered against the statement of a bank that the shares are deposited or upon deposit of the shares in the offices of the Company where they will remain blocked until the day after the general meeting.

The report Nestlé 1980 with the Annual Report of Nestlé S.A. (comprising the Balance Sheet and the Profit and Loss Account with comments, the Auditors' Report and the proposals for the appro*priation of profits), as well as the proposals of the Board of* Directors regarding the modification of the Articles of Association, are available to the holders of bearer shares as from 29th April, 1981, at the Registered Offices at Cham and Vevey, and as from 4th May at the Offices of the Paying Agents of the Company.

The holders of registered shares whose names are entered in the Share Register will, within the next few days, receive at their last address communicated to the Company, an envelope containing the Notice for the General Meeting, together with a form comprising an application for obtaining the card giving admission to such meeting as well as a proxy. On the other hand, the aforesaid Report and proposals will be dispatched a few days later.

The shareholders are requested to address any correspondence concerning the General Meeting to the Transfer Office of the Company at Cham (Switzerland).

The Board of Directors

Cham and Vevey,
27th April 1981

PUBLIC NOTICE

EDINBURGH BILLS

£1.5m Bills issued on 24th April 1981 at 11-23,64% to mature 24th July 1981. Applications £9.0m. Outstanding £5.0m.

TOKYU DEPARTMENT STORE CO., LTD.
NOTICE TO EDR HOLDERS

NOTICE IS HEREBY GIVEN that the *annual Shareholders Meeting for* the 118th term will be held in Tokyo on Tuesday, April 28, 1981.

Details of the Agenda are as follows:

(i) Recognition of the Balance *Sheet as at January 31st, 1981,* and Annual Report, Income Statement and proposed disposition of income for the year ended January 31st, 1981.

(ii) *The election of 20 Directors* and 2 Auditors.

Net sales for the year ended January 31st, 1981 amounted to Yen 244,806 million, net income amounted to Yen *2,272 million, and the year* end dividend subject to Shareholders' approval is Yen 3.00 per Share. A fuller statement of income is available at the offices of The Chase Manhattan Bank N.A., *Woolgate House, Coleman* Street, London EC2P 2HD and at Chase Manhattan Bank Luxembourg S.A., 47 Boulevard Royal, Luxembourg and at Morgan Guaranty Trust Company of New York, *Avenue des Arts* 35, 1040 Brussels and at Kredietbank S.A. Luxembourgeoise, 43 Boulevard Royal, Luxembourg.

EDR holders are informed that a further notice will be published stating the amount payable in U.S. dollars and actual payment date of the above dividend which is expected to be received *in Tokyo at the end of April.*

THE CHASE MANHATTAN BANK N.A. London as Depositary

April, 1981.

THE BROKEN HILL PROPRIETARY COMPANY LIMITED

(Incorporated in the State of Victoria)

The Broken Hill Proprietary Company *Limited announces that a half-yearly* dividend of twenty-one cents per share (being at the rate of twenty-one per cent per annum on the issued capital of the Company) will be paid on 27th May 1981 in Australian currency. Resulting fractions of one cent in dividend entitlements will be paid to the next whole cent above.

The books closing date fixed by the Company for the purpose of determining the persons *entitled* to the *dividend* is 29th April 1981. Transfers will be accepted for registration until 5 pm on that date at the Company's share registers at the following addresses:—

Australia

Melbourne, 140 William St.
Sydney, 20 O'Connell St.
Adelaide, 41-47 Currie St.
Canberra, Arthur Young & Company, 40 Marcus Clarke St.
Hobart, Perpetual Trustees and National Executors of Tasmania Limited, 29 Murray St.
Brisbane, 344 Queen St.
Perth, 37 St. George's Terrace.

UK

London, 14 Hanover Square.

As previously announced, new issue *shares — in respect of which the first* payment is due not later than 30th April, will not participate in the dividend paid on 27th May.

THE PRUDENTIAL ASSURANCE

Sands 'semi-lucid' as his fast continues

BY STEWART DALBY

MR. BOBBY SANDS, the MP and IRA prisoner now in the 58th day of his hunger strike, is now only semi-lucid. He seems likely to starve to death within the next 48 hours.

The Provisional Sinn Fein says he nearly died on Saturday night. Mr. Sands' family has been told to remain close to a telephone and doctors are keeping a 24-hour watch. He is having difficulty keeping down water, is virtually blind and deaf and could have a heart attack at any moment.

All efforts to persuade the newly-elected MP to call off his protest now appear to have been exhausted.

Mr. Sands has refused to call off his hunger strike unless the Provisional IRA's five demands about prison conditions are met. Mrs. Thatcher has refused to accede to the demands, saying that to do so would be tantamount to declaring political status.

Two visiting members of the European Commission for Human Rights left Belfast yesterday without seeing Mr. Sands.

He had refused to see them unless two members of the Provisional Sinn Fein, and Mr. Raymond Macfarland, another H-block internee, were present. The Northern Ireland Office refused to allow this.

Dr. John O'Connell, an Irish MP who visited Mr. Sands a week ago, has offered to make another visit. However, the National H-Block Committee has been unable to confirm if Mr. Sands would agree to see him.

The Provisional Sinn Fein has warned of serious political repercussions if Mr. Sands dies.

"His death will totally isolate the Brits," a spokesman said. "It will become impossible for the SDLP and Fianna Fail to talk with them."

But he did not think there would necessarily be an outburst of IRA violence.

"If you look at the IRA strategy, they have prepared themselves for a long war and they may not want to exhaust their resources in a short burst of activity."

Republican News, the Provisional Sinn Fein paper, said *there will be "fire and fury"* if Mr. Sands dies. It has advised people in Roman Catholic ghettos to stock up on food and medicines in preparation for eige conditions.

The Irish National Liberation Army has hinted that there could be resumed military *activity if Mr. Sands dies.*

Parties predict low turnout in county council elections

Gareth Griffiths assesses the candidates and their campaigning

PARTY WORKERS are predicting a low turnout for next month's council elections in England and Wales.

However, the voting figures will be an important indicator of the popularity of the Government, which is strongly on the defensive, particularly in the urban areas. In the last county council election, four years ago, only 40 per cent of the electorate voted.

In spite of the generally unexciting tempo of the campaign, the results will be awaited with special interest, because the Government's *standing has been tested in* only four by-elections so far.

The two main parties will be particularly interested to see whether the foundation of the Social Democratic Party will cause many voters to defect from the Tory and Labour standards to the Liberals or one of the other "centre" parties, even though no official SDP candidate will be standing.

At present, the Tories run the counties in which 88 per cent of the people of England and Wales live. Labour controls Mid and West Glamorgan, Gwent, Durham, and the metropolitan counties of South York*shire, and Tyne and Wear.*

Independents hold Cornwall, Dyfed, Gwynedd and Powys are dominated by Independents and no party has overall control of Clwyd or Salop. Conservatives control the other 36 non-metropolitan counties in England and Wales—the shire counties—and four of the six metropolitan counties

Conservatives admit they are on the defensive in the elections because many of their seats were won at the height of Labour's unpopularity in 1977.

Conservatives believe they will hold a majority of the English counties and thus keep *their majority* on the Association of County Councils.

Both the Conservatives and Labour think the most likely result will be a repeat of the 1973 elections in which Labour dominated the Metropolitan areas, while the Conservatives controlled most English shire counties, particularly in the South. There were also a large numbers of councils in which no party had an overall majority.

Labour believes it will win the Greater London Council, Greater Manchester, the West Midlands, West and South Yorkshire, Tyne and Wear, South *Glamorgan, Cleveland, Derbyshire,* Humberside, Nottinghamshire and Staffordshire. It could win Cumbria but there are doubts over Merseyside where a hung council is most likely.

The Conservatives hope to retain control of the West Midlands but privately have written off the rest of the metropolitan authorities. Heavy Conservative losses are expected particularly in Avon, Cheshire, Berkshire, Hertfordshire, Lancashire and Leicestershire.

Liberal hopes are concentrated on the Isle of Wight where the party hopes to win outrgiht control of the county.

The Liberals aim to become the main opposition party on West and East Sussex councils and hold the balance of power in Merseyside and Hereford and Worcestershire.

County councils are responsible for public transport, education, planning, economic development, fire and police and social services.

social services, but, metropolitan counties district authorities have respondsibility for education and social services.

The counties have been in the front line of rows over spending cuts and changes in *school meals, the reduction of* rural transport and the cuts in education and social services.

This year non-metropolitan counties will spend on average £333.50 per head of population and their precepts on the rates will have risen by 8.9 per cent.

Several candidates have got unofficial backing from leading Social Democrats, who are likely to make the most impact are in Lincolnshire, Merseyside and Northamptonshire.

All the parties—except Plaid Cymru—are putting up more candidates than in 1977. In England the Conservatives are fielding 3,335 candidates and contesting 90 per cent of all the seats. Labour has put up 3,321 candidates and the Liberals 2,040 candidates.

In Wales the number of candidates has also increased with Labour putting up 402 candidates, the Conservatives 200, Plaid Cymru 172, the *Liberals 87 and Independents* 316.

Boundary changes—in 21 shire counties—are likely to have most effect in Cumbria — benefiting Labour — and Humberside—to the Tories' advantage.

Campaigning reflects national *issues with many local variations.* In Oxfordshire the route of the M40 through the county has caused most interest; in the Isle of Wight there is a row about the building of a public swimming pool; in Mid Glamorgan a long-standing row about the county's plans for the Welsh language in education; and on Merseyside the Labour and Liberal parties have attacked the council for "rushing through" a stage of Liverpool's inner city ring road.

Conservative election manifestos generall emphasise the way their councils have carefully husbanded ratepayers' money, and warn about rate increases if Labour gets in.

Labour candidates argue that spending cuts have resulted in deteriorating educational, transport and social services. The party in most areas is committed to reversing the cuts and wants counties to play a *greater role in trying to* regenerate the economy.

Liberal candidates want more agency work to be done by district councils and suggest that council meetings should include a public question time. Liberal manifestos generally suggest greater emphasis on *personal social services*

Scottish Sunday paper launched

By Mark Meredith

THE Sunday Standard, the new quality newspaper for Scotland, was launched yesterday with a front page report that Soviet spies were "still operating in Whitehall."

The newspaper is printed on the Glasgow presses of Outrams, which publishes the Glasgow Herald. The Sunday Standard aims to make inroads into the Scottish readership of the London-based Sunday newspapers, and hopes for a circulation of about 175,000.

"We intend to give Scottish Sunday readers the excellence of writing and reporting previously available only from London," said the newspaper's opening leader.

Pre-launch advertising for the Sunday Standard took the same line with full-page pledges of a newspaper "which knows there is a theatre, music and literary scene north of Hampstead."

Yesterday's front page carried an interview with General Sir Michael Gow, Commander in Chief of Britain's Army of the Rhine. He said he assumed that Soviet spies Philby, Burgess and Maclean were not isolated issues and other spies were still active in the British diplomatic corps and Government.

Another front page report said that two business consortiums were bidding to reopen the huge pulp mill at Fort William which was closed by the Wiggins Teape Group last year.

Mr. Charles Wilson, Sunday Standard editor, admits that the newspaper was launched in a rush to beat possible competition from the camp of the Scotsman, the Glasgow *Herald's rival in Edinburgh.*

The failure of the Scotsman's management to launch a Sunday paper before the Sunday Standard was behind a document issued by Scotsman journalists earlier this month expressing a lack of confidence in their management.

The journalists went on strike on April 18, to back a pay claim. They say their colleagues in Glasgow receive on average £3,000 a year more.

Scotsman management and the union are to meet again today.

Underwriters expect bad year's results

BY JOHN MOORE

INSURANCE underwriters are likely to have an even worse year in 1981 than they had in 1980.

That is the veiw of many of the chairmen of major UK composite insurance groups and most of the UK insurance brokers who have reported their 1980 figures in the last few weeks.

To a large extent their views are confirmed by the trends indicated in North America, the world's largest insurance market. The giant Aetna Life and Casualty insurance group has said it anticipates very unsatisfactory first quarter results because of the intense competition, which the company says *has reached a level unparalled* in the business.

Aetna Life has decided to make a stand against worsening trends. It has announced that it will increase rates on all lines of business to avoid considerable deterioration in its underwriting results.

Notwithstanding the initiative by Aetna in Conning and Co., the U.S. stockbroker which studies the U.S. insurance industry closely, remains pessimistic.

It expects the industry's combined ratio of losses and expenses as a percentage of property and casualty premiums to exceed 110 per cent for 1981 and 1982. This compares with a combined ratio of about 104 per cent in 1980.

Overcapacity persists in worldwide insurance markets. Too many markets are chasing business which is not growing at the same rate as available market, and this had led to intense price competition. At the same time worldwide recession has restricted the premium growth necessary to cover the continued high rates of inflation in insurance related costs.

Contributing to the continuing competitive pressures are high interest rates. Although interest *rates have fallen recently they* are still at historically high levels.

Many insurers have sought to exploit the high rates of interest to offset the effects of competition by seeking business with long payout periods, such as liability insurance risks. The long tail nature of the business produces strong positive cash flows which generate the investment income needed to meet the rising costs of claims in inflationary conditions.

Brokers are facing little growth in broking income because of the pressure on insurance rates, and their expense ratios remain high.

They are looking for more support from investment income through premium handling; and transmisions of premiums in the insurance and reinsurance chain have slowed considerably. Moreover, in an effort to support their earnings the brokers are attempting to extend their own underwriting activities and this is contributing to the capacity problems.

Underwriters may not be showing a technical underwriting profit in many instances but conditions may not be as bleak as they appear.

While U.S. property and casualty insurers may be facing a substantial worsening of *conditions in the current year,* experts are predicting that insurers will not have to liquidate stocks and bonds to maintain cash flow as they did in the mid-seventies.

It has been estimated that U.S. property and casualty insurers made an average 14.5 per cent return on their equity in 1980, after taking investment income into account. This is likely to fall in 1981 and 1982 but has not yet reached levels where it has become unacceptable.

With sufficient capital in the industry and high investment yields, the industry rates of return are likely to decline slowly which in turn will do nothing to relieve the competitive pressures.

In these conditions there are signs that some small weaker based groups, often undercapitalised and reliant on the reinsurance market to support ambitious growth plans, are being forced out of the market. This may cause short term disruption in some markets but will shake out some of the excess capacity in the insurance industry.

Even so there is little sign of any upturn in the underwriting cycle. Competitive pressures are likely to depress rates well into next year. Combined ratios of property and casualty insurers in the U.S. could approach 115 per cent.

County Bank director dies

director of County Bank, died in Tokyo on April 24. He was 39.

Mr. Lamont went to County Bank about 18 months ago from another merchant bank, Hill Samuel, which he joined in 1971, becoming a director three years later.

CONTRACTS AND TENDERS

Franchise proposal for Press attacked

By Alan Pike

THE PRESS must not be "put at the mercy of a bureaucratic committee dispensing franchises." Mr. Nicholas Herbert, president of the Guild of British Newspaper Editors, said at the annual conference in York at the weekend.

He said that the Campaign for Press Freedom, formed among other things to examine alternative means of newspaper ownership, would be better called "the campaign for Press Control."

It had been suggested that newspaper publication franchises be issued by an independent Press authority on the lines of the Independent Broadcasting Authority.

But while airwaves were limited, and had to be regulated in some way, newspapers need be subject to no such regulation.

One of the greatest challenges facing the newspaper industry was the need to break away from old-fashioned, expensive and inefficient production methods.

"The importance of a Press able and free to dig out information is clear, but while we are all diverted by the sheer difficulty of getting out newspapers we cannot do our job as well as we should."

● Mr. Hugh Dundas has been appointed chairman of Thames Television in succession to Lord Barnetson, who died earlier this year.

A director of Thames since its foundation in 1968, Mr. Dundas is chairman and chief executive of BET and chairman of Rediffusion. Rediffusion Television, part of BET, owns half the share capital of Thames. Mr. Dundas joined Beaverbrook Newspapers in 1948, where he held editorial and managerial posts before joining Rediffusion in 1961.

Glassworks sit-in

WORKERS occupied the United Glass Works, St. Helens, at the weekend and kept senior management out in protest at issuing of 53 compulsory redundancy notices.

The 300 on the weekend shift continued to work normally. The General and Municipal Workers' Union said yesterday that full production and delivery of orders had been maintained. Management offered to hold joint talks today. Union officials say they will not co-operate until the redundancy notices are withdrawn.

Feed plant closing

SPILLERS will close its troubled Uveco Mill animal feed plant at Birkenhead in October, with loss of 78 jobs. The first 20 will go in June, the rest in October.

Negotiations are continuing with the unions. The workers were told at the weekend that the closure was forced by rising costs and falling demand.

Lloyd George boom

A SMALL MUSEUM featuring the life of Lloyd George and once threatened with closure, is enjoying a new lease of life thanks to the BBC. Visitors flock to the North Wales village of Llanystumdwy after watching the television serial The Life and Times of David Lloyd George on BBC2.

The Liberal politician and former Prime Minister spent his boyhood in the area and is buried nearby.

Rolls-Royce in Spey engine deal

BY MICHAEL DONNE

ROLLS-ROYCE is likely to obtain business worth at least £100m over the next 20 years after a deal for the sale of its military Spey engine for an Italian-Brazilian light fighter aircraft, the AMX.

The AMX was conceived by the Italians some time ago as a single-engine light strike and ground attack aircraft. It has also been adopted by Brazil for its airforce. Development work will begin soon and the aircraft is intended to enter service in about 1988-1989.

A total of 300 aicraft is planned—200 for Italy and 100 for Brazil. Considerable interest is already being shown by other countries and sales could run to as many as 1,000 in the next decade.

The investment in the programme for initial design development and production is estimated at $600bn (£275bn). Italy will subscribe $400bn and Brazil $200bn.

Rolls-Royce will be a sub-contractor, selling Spey engines to both Italy and Brazil, and assisting in the fighter's engine and air frame integration.

The aircraft will be built in Italy by Aeritalia and Macchi, and in Brazil by Embraer, the publicly-owned aircraft company in which the Brazilian Government has a 10 per cent stake.

A big team of Embraer technicians is in Italy working out the final details of the finance and work sharing programme.

The AMX venture will be fully collaborative. Embraer and Aeritalia and Macchi will each make parts for all 300 aircraft, shipping them to assembly lines in both Italy and Brazil.

Embraer will also join in the detailed design and flight testing of the aircraft and share in all export sales.

The manufacturers aim to keep the aircraft price as low as possible to encourage the maximum possible sales. They want to interest third world countries which cannot afford the higher prices of U.S. and West European manufacturers.

The military Spey engine is regarded by the Italians and Brazilians as well-proved, readily available, and reasonably priced.

The engine is used in the Phantom jet fighters of the RAF.

The deal between the Italians and the Brazilians will give the engine a new lease of life, for at least another 20 years.

Butchers' president attacks 'stupidity' of EEC

THE "stupidity" of the Common Market in exporting meat which drains supplies at home and pushes up prices must be deplored, Britain's butchers were told yesterday.

Mr. Jack Bailey, president of the National Federation of Meat Traders, said supplies caused a constant problem because of the economic and political climate of the EEC.

Beef supplies had been badly hit by lower home production, increased exports and reduced imports and prices had risen as a result, he told the federation's annual conference in Harrogate, Yorkshire.

"The stupidity of the system which allows massive exports of manufacturing beef whilst severely restricting imports is to be deplored."

He accused local authority trading standard officers—who had unsuccessfully brought "case after case before the courts," to try to establish how much fat there should be in mince—of "harassment and bureaucratic involvement."

April food prices reflect upward trend

BY GARETH GRIFFITHS

FOOD PRICES continued their steady upward trend in April, according to the latest Financial Times Grocery Prices Index.

The April index stood at 134.93, compared with 132.76 in March. It was the sixth month in succession that the index has increased.

The pattern which has emerged in recent months repeated itself in April. There were price increases in most sections of the basket although the prices for sugar, tea, coffee, soft drinks, preserves, and dry groceries and canned goods all dipped slightly. But dairy produce, bread and cereals, frozen foods, non-foods and fresh meat all rose.

Fruit and vegetables, usually one of the most volatile sections of the FT shopping basket rose sharply from £248.04 to £282.50. Bramley cooking apples, avocados, Jaffa grapefruit, pineapples, English rhubarb, lettuce, English and Scottish white potatoes, mushrooms and spring cabbage represent best value for shoppers in this section, according to the Fresh Fruit and Vegetables Information bureau.

The index is based on data collected by 25 shoppers who monitor the same lost of 100 grocery items each month in the same shops. The shops chosen range from superstores to small village grocers.

The grocery prices index is meant only as a guide and not as an absolute indicator of food prices. These can vary according to shop, type and region. The level of food sales in the grocery business was affected by the Easter holidays which normally lead to a surge in food sales.

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FT SHOPPING BASKET APRIL, 1981

	April £	March £
Dairy produce	670.18	670.02
Sugar, tea, coffee and soft drinks	210.91	211.55
Bread, flour and cereals	307.78	307.43
Preserves and dry groceries	111.84	112.95
Sauces and pickles	54.03	54.76
Canned goods	190.25	190.36
Frozen foods	237.92	234.61
Meat, bacon etc. (fresh)	561.20	551.95
Fruit and vegetables	282.50	248.04
Non-foods	242.20	241.23
Total	2,868.81	2,822.90

1980: January 120.47; February 122.32; March 124.18; April 125.94; May 128.79; June 128.53; July 129.04; August 128.41; September 127.41; October 126.84; November 127.77; December 129.38.
1981: January 130.96; February 131.75; March 132.76; April 134.93.

Forty years on, Dakotas are still flying high

By Lynton McLain

EASTERN AIRWAYS starts a Humberside-London service this morning with a DC-3 Dakota aircraft that flew for the first time to Arnhem at the end of the Second World War.

The airline, a private British company, owns three DC-3s—about 600 are still in commercial service worldwide—and says that metal honeycomb structures instead of conventional metal spars give the aircraft a long rust-free life.

It has removed 10 of the original 36 seats to give passengers more leg room on the flight to Heathrow.

Eastern was awarded the route six weeks ago by the Civil Aviation Authority in place of Air UK which withdrew its Humberside-London operations in October last year.

The new twice daily service includes a 15-minute stop at Norwich. The 7.25 morning flight from Humberside Airport at Kirmington, south of the River Humber, is scheduled to arrive at Heathrow at 9.30. The return flight leaves Heathrow at 9.55.

The afternoon flight leaves Humberside at 16.25, landing at Heathrow at 18.30, with the return flight at 18.55.

Single fares will be £41.50. The airline has started talks with British Airways about co-ordinating their services.

Eastern is owned by Lease Air, which is owned 100 per cent by Leighford Holdings, a Lincolnshire group with interests in goods vehicle maintenance, vehicle distributorship and the manufacture of cathode ray tubes.

Group turnover last year was £9m and pre-tax profits £185,000.

Before winning its CAA licence in March, the airline operated charter flights and freight services in Europe.

Steel company to appeal over EEC output order

DARLINGTON AND SIMPSON ROLLING MILLS, the private steel company in Co. Durham, is to appeal against an order from the European Commission *to cut output by nearly half* or face a £720,000 fine.

Mr. John Carter, managing director, said yesterday that he was not optimistic about getting the order changed.

Mr. Denzil Davies, Labour Front Bench spokesman on the Common Market, said he would take up the case with Ministers.

Mr. Carter said that even if the EEC insisted on a cut in the 38,000 tonnes of output planned to end June there would be no lay-offs or short time for the 850 workers.

"They can rest easy. If they fine us, we shall go to the European Court of Justice, and appeal and appeal and appeal."

The order is made under Article 58 of the Treaty of Paris, which gives the European Commission power to impose production controls throughout the European steel industry.

The mandatory controls are due to run to the end of June, when they are expected to be replaced by voluntary arrangements. They were introduced last November in an attempt to stabilise prices at a time of severe over-capacity.

Two EEC inspectors visited Darlington last week and ordered a cut from the planned 38,000 to 20,000 tonnes, with the prospect of a fine of £40 for each excess tonne produced.

Though Mr. Carter agreed with the aim of the ruling, he objected to the universal application, and said that most of the company's products were not made by other European steel companies. He feared his customers would turn to Japan.

Concern over butter policy

MANY OF Britain's leading food companies yesterday expressed their concern at the shortage of butter supplies for manufacturing caused by the Common Market's policy of exporting cheap butter—especially to Communist countries.

They also fear Brussels might raise the price of butter for manufacturing, which could raise the price of thousands of food lines as the increase is passed on to consumers.

The commission has admitted that as a direct result of its exporting policy, the butter mountain has been reduced from its August, 1979 peak of 590,000 tonnes to less than 40,000 tonnes—little more than one week's supply.

A number of traders are committed to exporting large quantities of butter outside the community, even though there are not enough stocks in private store to meet this demand.

The EEC has been selling off butter to East European countries at heavily subsidised prices. Much of the present stockpile is already earmarked for Poland as part of a food aid programme.

The EEC is the world's largest exporter of butter and any threat of a shortage will push up world prices further—encouraging more exports.

UK NEWS

Analysts despair of orthodox options

BY PETER RIDDELL, ECONOMICS CORRESPONDENT

ORTHODOX economic policies, including reflation and devaluation, no longer offer any hope of rescuing the economy from the appalling condition produced by the present economic strategy, the Cambridge Economic Policy Group argues in its latest annual policy review published this morning.

The group, also known as the New Cambridge School, consists of 11 economists at the university's Department of Applied Economics, headed by Professor Wynne Godley.

The review is highly critical not only about Government economic policy over the last five years but also about the main alternatives now on offer.

"It remains our view that import controls would be necessary to sustain recovery on a scale which would bring unemployment down while at the same time keeping inflationary pressures within tolerable bounds."

"But we are bound to add that reflation and devaluation, though hardly satisfactory, will be less dangerous than the continuation of present policies. If the economy will not turn, the Government must."

This analysis reflects projections that if present policies are continued output will continue *to fall and unemployment* will rise—up to nearly 4.5m by the mid-1980s.

The group claims that events in recent years have shown that its model of the economy is right and that the Government's view is wrong.

A comparison with the projections published in the annual review last year shows that the group has been too pessimistic in its forecasts. A year ago, it underestimated real Gross Domestic Product in 1980 by more than 4½ per cent compared with its current view of the outcome. From this higher base, the group is still projecting a 3.5 per cent decline in GDP between 1980 and 1981.

ECONOMIC OUTLOOK ON PRESENT POLICIES

— £bn at 1975 market prices
(last year's base run projections in brackets)

	1980	1981	1983	1985
Consumer spending	71.7	71.6	71.2	73.1
	(66.8)	(67.0)	(70.4)	(74.5)
Gross Domestic Product	112.3	108.5	103.6	101.3
	(107.0)	(103.2)	(101.6)	(100.6)
Unemployment, millions	1.6	2.6	3.6	4.3
	(1.9)	(2.6)	(3.6)	(4.4)
Consumer prices, per cent change over previous years	15.0	13.7	9.8	8.7
	(19.1)	(12.6)	(9.8)	(7.9)

Source: Cambridge Economic Policy Review.

The review maintains that the North Sea has been used to destroy the UK's economic base. "The reason for this appalling result lies in the policies adopted *by the last Government* and enforced with increased vigour by the present Government. These have driven up the exchange rate and imperilled industry.

"The Government insists that its tough budget is essential to reduce inflation and secure long-term recovery. Its critics are united by the fear that the budget will cause deepening slump."

The review argues that, irrespective of the Budget, past policies have already set up the conditions for a continuing *slump. "The recession might be* steadied or even briefly reversed by a fall in the rate of destocking or a fall in personal savings. But these factors could only have a once-for-all effect. After that the recession would continue to deepen."

These factors may slow the rate of contraction by ½ or 1 per cent over a period of two or three years.

The group says that no one should be comforted by the fact that recessions in the past have always bottomed out, nor by the behaviour of leading indicators compiled *on the basis of* past statistical correlations with no casual hypothesis to support them.

The review examines the causes of the present problems and various alternatives which have been suggested.

The group argues that the strong sterling exchange rate is because of an incorrect view of the causes of inflation which reflects tax push pressures and the desire by workers to maintain real incomes.

The review examines various alternative approaches which have been proposed, notably reflation and devaluation. However, the Cambridge economists argue that "any major reflation implies a huge balance of payments deficit and/or an utter collapse of sterling, unless it is accompanied by exchange controls and import controls."

On the group's view, merely to stabilise unemployment at current levels would involve a huge stimulus to domestic spending to produce a growth rate of aproaching 3 per cent a year. The deficit on current account would come to around £5bn next year and £10bn the year after. Allowing for long-term capital and direct investment abroad, the financial deficit on the balance of payments would be something like £10bn next year and £15bn in 1983.

Te keep reflation *going*, thhe public sector borrowing requirement would have to reach some £20bn next year and nearly £30bn the year after.

Devaluation is also regarded as very risky because of the impact on domestic costs, wages and prices. "Inflation, incomes policy or both might be acceptable if sustained and rapid depreciation of sterling were capable of inducing a major recovery of output and employment.

"Our estimate is, however, that with the exchange rate down to less than half its present level by 1985, there would still be a chronic 3m level of unemployment. The rate of price inflation would have accelerated to well over 20 per cent a year.

After reviewing these policies, the group concludes that there "is no alternative which *would rescue the economy* other than import controls and exchange controls as a way of holding the balance of payments situation while some new momentum is given to *domestic* industry."

Several recent developments in the UK economy are examined in the review. Among other points, the group argues that "so far there is no clear or strong indication that recession "will depress the growth of money earnings in any enduring way."

In a discussion of industrial restructuring, the group main*tains that there is "no sign that* industries which undertook shake-outs of labour in the early 1970s made any subsequent gain in competitiveness relative to those which had expanded their employment.

"The latter group continued to have a considerably better export performance than those which cut their manpower. The comparison implies that redundancies and closures achieved no more and no less than a contraction of the industry in question and contradicts any idea that in general shake-outs *are a necessary first step on the* road to recovery."

Cambridge Economic Policy Review. April 1981. Vol. 7. No. 1. Gower Publishing Company. Westmead. Farnborough, Hampshire.

This week's business in the Commons and Lords

TODAY

Commons — Wildlife and Countryside Bill, second reading. Motions on Diving Operations at Work Regs.

Lords — Animal Health Bill, committee. British Telecommunications Bill, second reading. Short debate on needs of children

TOMORROW

Commons—Supply day: debate on economic and social problems of Greater London. Opposed private business.

Lords — Insurance Companies Bill, second reading. Fisheries Bill, committee. Energy Conservation Bill, consideration of Commons amendments.

Select committees — Defence. *Subject: Defence White Paper.* Witnesses: Ministry of Defence Officials. (10.30 am, Room 5.) Employment. Subject: Homeworking. Witnesses: Borough of Hackney, Leicester City Council, Health and Safety Executive. (4 pm, Room 8.) Procedure (Supply): Subject: Supply procedure. Witness: Mr. John Silkin MP (4.15 pm, Room 15.) Parliamentary Commissioner for Administration. Subject: Reports of Health Service Commissioner. Witnesses: Department of Health and Social Security, Scottish Home and *Health Department, Welsh* Office (5 pm, Room 5.)

WEDNESDAY

Commons — Deep Sea Mining (Temporary Provisions) Bill, second reading. Supreme Court Bill, second reading. Health and Safety (Fees for Medical Examinations) Regulations.

Lords — Short debate on need for greater equality in UK. Short debate on future of newspaper industry. Marriage (Enabling) Bill, report. Short debate on action to ensure that Edinburgh Outer City by-pass is completed in time for Commonwealth Games in 1986.

Select committees — Scottish. Subject: Youth Unemployment in Scotland. Witnesses: Youth Aid, Association of Principals of Colleges (Scottish Branch) (10.30 am, Room 5.) Welsh. Subject. Scrutiny of Welsh Office Departments. Witnesses. Welsh Office Agriculture Department. (4 pm, Room 18.) Employment Committee (4.30 pm, Room 8.) Social Services: Subject: Medical Education. Witness: Mr. Patrick Jenkin, Social Services Secretary (4.30 pm, Room 21.)

THURSDAY

Commons — Finance Bill, committee.

Lords — Animal Health Bill, third reading. Companies (No. 2) Bill, third reading. Debate on report of EEC on environmental assessment of projects.

Select Committees — Defence. Subject: Defence White Paper. Witnesses: Ministry of Defence Officials (10.30 am and 4 pm, Room 15.) Agriculture. Subject. Animal welfare in poultry, pig and veal calf production. Witnesses: Prof. D. Coleman, Mr. D. Burton, Miss F. Turner, Mrs. J. Strak, Mr. T. R. Morris. (11 am, Room 16.)

FRIDAY

Commons — Private Members' Bills.

Vehicle repair unit opens

BERRY WIGGINS, part of KCA International, has opened a £1.75m vehicle repair and maintenance until on the Kingsnorth Estate, near Rochester, Kent.

It comprises a service and engineering workshop with parts store and a workshop for refurbishing more than 700 vehicles a year.

The valeting service for vehicles — from cars and plant to heavy commercial vehicles and road tankers—includes external cleaning by shotblasting; internal high-pressure steam cleaning of road tankers; tank purging and gas-free certification; refurbishing of discharge and hydraulic hoses; and high-quality spray painting.

Worldwide search for veteran engine

THE PERKINS Diesel Engine Company, Peterborough, has launched a worldwide search for the oldest working engine made by the company.

Founded in 1932 as a back-street business by the late Mr. Frank Perkins, who kept his accounts in a tuppenny notebook the company wants the engine for a Golden Jubilee display.

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Financial diary this week

The following is a record of the principal business and financial engagements during the week. The Board meetings are mainly for the purpose of considering dividends and official indications are not always available whether dividends concerned are interims or finals. The sub-divisions shown below are based mainly on last year's timetable.

COMPANY MEETINGS—
Automated Security, 28-28, Hampstead High Street, NW, 12.00
Baynes (Charles), 6, East Park Road, Blackburn, 12.00
City and Foreign Inv., 117 Old Broad Street, EC, 2.30
North Surrey Water, The Causeway, Staines, Middx., 11.00
Scottish Eastern Inv. Tst., 29, Charlotte Square, Edinburgh, 12.30

TODAY
BOARD MEETINGS—
Finals:
Allebone
Ests. and Gen. Invs.
Gerrard and Natl. Discount
Hunting Pet. Services
Jersey Electricity
London Utd. Invs.
Pentland Inds.
Scottish Ntnrn. Inv. Tst.
Simon Eng.
Speer and Jackson
Viking Resources Tst.
Interims:
Lyles (S.)
Safeguard Ind. Invs.
DIVIDEND & INTEREST PAYMENTS—
Braime (T. F. and J. H.) Ord. and A Ord. 2p
British Aluminium 2p
Cons. Plantations Berhad 7 Sen.
Exchequer 13½pc 1994 6¾pc
Green (R.) Properties 0.7p
Macallen Glenlivet 2.25p
New Equipment 0.7p
Norfolk Capital Grp. 0.7p
North Surrey Water 7pc 3.5pc. Do. 4.9pc A 2.45pc. Do. 4.9pc B 2.45pc. Do. 3.5pc 1.75pc. Do. 3.5pc (fmly 5pc) 1.75pc
Woolworth (F.W.) 3.5695p

TOMORROW
COMPANY MEETINGS—
Camellia Invs., Athenaeum Hotel, 116 Piccadilly, W, 10.30
City Offices, Winchester House, 100, Old Broad Street, EC, 12.00
IMI, Midland Hotel, New Street, Birmingham, 12.00
Investing in Success, Regis House, King William Street, EC, 12.30
LASMO, Ironmongers' Hall, Shaftesbury Place, Barbican, EC, 11.00
Mercantile Inv. Tst., The Chartered Insurance Institute, 20, Aldermanbury, EC, 12.00
Needlers, Sculcoates Lane, Hull, 12.00
Ratcliffs (Great Bridge), Birmingham Chamber of Commerce, 75 Harborne Road, Birmingham, 3.00
Tace, Essex Hall, Essex Street, WC, 3.00
Trident Television, Dorchester Hotel, Park Lane, W, 11.30
Vantona Group, The Midland Hotel, Manchester, 2.30
BOARD MEETINGS—
Finals:
Ecdycote Intnl.
Border and Southern Stockholders Tst.
Clarke (Clement)
Corinthian Natl. Inv.
English Natl. Inv.
Farnell Elecs.
First Castle Elecs.
Lake View Inv. Tst.
Marlborough Property
Newarthill
North (M. F.)
Sheffield Brick
Slentnight
Sunlight Services
Tarmac
Interims:
Bailey (Ben) Construction
MY Dart
DIVIDEND & INTEREST PAYMENTS—
Anglia Television NV A 3p
Bank of Nova Scotia 42cts
Blundell-Permoglaze 6½pcPfd. 2.275pc
Camellia Invs. 5p
Canadian Imperial Bank of Commerce 47cts
Hong Kong and Shanghai Banking Corp. HK$0.47
Mercury Transatlantic Tst. 51p
National Westminster Fin. BV Gtd. Fltg. Rate Cap. Notes 1991 US$845.99
Sharpe (Charles) 4.12p
Toronto Dominion Bank 40cts

WEDNESDAY, APRIL 29
COMPANY MEETINGS—
Authority Invs., Cadogan Hotel, 75, Sloane Street, SW, 12.00
Barclays Bank, 54 Lombard Street, EC, 2.30
Fife Forge, Smeaton Road, Kirkaldy, Fife, 12.00
Ford (Martin), Winchester House, 77, London Wall, EC, 12.00
Garton Engineering, Park Hall Hotel, Park Drive, Goldthorn Park, Wolverhampton, 12.00
Molins, Plaisterers Hall, 1, London Wall, EC, 12.15
Sale Tilney, 28, Queen Anne's Gate, SW, 12.30
Squirrel Horn, Belgrave Hotel, Dialstone Lane, Stockport, 10.30
Waldorf Stationery, Newton Mill, Hyde, Cheshire, 2.30
BOARD MEETINGS—
Finals:
Blue Circle Inds.
Border Breweries (Wrexham)
Bulgin (A. F.)
Foseco Minsep
House of Fraser
Jessel, Toynbee
Marshall's Universal
Shiloh Spinners
Office and Elec. Machine
Thomson T-Line Caravans
Whatman Reeve Angel
Interims:
BAT Inds.
Devenish (J. A.)
DIVIDEND & INTEREST PAYMENTS—
Barlow Rand Pf. 6pc
City and Foreign Inv. 0.7p
Killinghall Tin (Malaysia) Berhad 65 Sen.
Mercantile Inv. Tst. 1.25p
News Intnl. Special Div. 2.8365p
Renong Tin Dredging 3p

THURSDAY, APRIL 30
COMPANY MEETINGS—
Allen Harvey and Ross, 45, Cornhill, EC, 12.30
Beatson, Clark, Hallam Tower Hotel, Sheffield, 12.30
Bond Street Fabrics, Great Eastern Hotel, Liverpool Street, EC, 12.00
British Petroleum, Barbican Centre, Silk Street, EC, 11.30
East Lancashire Paper, Civil Hall, Thomas Street, Ratcliffe, 11.30
Gordon (Luis), Caxton Hall, Caxton Street, SW, 12.00
Howden (Alexander), Great Eastern Hotel, Bishopsgate, EC, 12.00
Mole (M.), 24-26, St. Albans Road, Watford, Herts, 10.00
Watmoughs, Low Hall, Calverley Lane, Horsforth, near Leeds, 12.00
Woodhouse and Rixson, Tapton Hall Shore Lane, Sheffield, 11.45
BOARD MEETINGS—
Finals:
BSG Intnl.
Boosey and Hawkes
Davies and Newman
Downibrae
Hopkinsons Hldgs.
Mowlem (John)
Slingsby (M. C.)
Wimpey (George)
Interim:
Simpson (S.)
DIVIDEND & INTEREST PAYMENTS—
A. I. Industrial Prods. 0.01p
Adams Gibbon 2.5p
African Lakes 1.1p
Allied Farm Foods Db 4pc
Amatil 3¼pc
Amber Day 0.9p. 10½pcPf. 5.25pc
Anglo American Gold Invst. 600cts
Anglo-American Industrial Cpn. 97.5cts
Armour Tst. 5¼pc
Ashbourne Invst. Ln 4¼pc
AEI Db. 3pc
Associated Dairies Db 3¾pc
Aveling Barford Db 3¾pc
Babcock Industrial Electrical Prods. Db. 3¾pc
Bath 11¼pc Red 1985 5⅝pc
Bath Portland Gp. 7¼pcPf 2.7125pc. Ln 5¼pc
Batleys Yorkshire 10pcPf 5pc
Baynes (C.) 0.85p
Beattie (J.) Db 3¼pc
Belam Gp. 1.25p
Blackwood Hodge 6pcPf 2.1pc
Blundell-Permoglaze Db 3¼pc. Ln 3½pc
Boulton (W.) Gp. 8½pcPf 2.975pc
Brascan Class A Cnv. 30cts
Britannic Assurance 9p
British Columbia Electric Perp. Callable Bds. 2½pc. Bds. Sers. Ad. (due 1/8/86) 2½pc
British Land Ln. 6pc
Brixton Estate Db 3¼pc
Brown Tawse 7pcPf 2.45pc
Brontons (Musselburgh) 5.21p
Burgess Prods. 6pcPf 2.1pc
Burman Oil 6pc 1st and 2nd Pfs 2.1pc. 8pcPf. 2.8pc. 7¼pcPf. 2.5375pc
Cantors 2.625pc
Chemring 4.9pcPf 2.45pc
Chester Waterworks 8pcRedPf 2.63pc
Clark (M.) Sons 7pcPf. 2.45pc
Clufsom-Penn Intnl. Dbs 3¼. 3¼pc
Consolidated Gold Fields 8.5p
Coronation Syndicate 16.6348p
Cowan De Groot 10½pcPf. 5.25pc
Crowther (J. E.) 5½pcPf 1.925pc
Davenports' Brewery 5pcPf. 1.75pc
De Beers Consolidated Mines Dfd. (Reg.) 50cts. Dfd. (Br.) 50cts
De Beers Industrial Cpn. 100cts. Pf. 2¼pc
Dow Chemical 45cts
Drake Scull 7pcPf. 3.5pc
Dundee London Invst. Tst. 5pcPf. 1.75pc
Dunlop Hldgs. 5¾pcPf. 2.0125pc. Db. (1972-82) 2¼pc
East Worcestershire W.W. 8pcRedPf. 1981 2.608pc
Ellis Everard Db. 3⅝pc
English Electric Db. 3¼pc
English Property Cpn. Db. 4¹⁵⁄₁₆pc. Ln. 3½pc
Estates Property Invst. Db. 3pc. Ln. 3¼pc
Excalibur Jewellery 0.2p
FMC 4.4pcPf. 2.2pc. 5.45pcPf. 2.725pc
Fife Forge 3p
Findhorn Finance Ln. 8¼pc
Fisons Dbs. 3. 3¼pc
Ford (Martin) 0.65p
Foreign Colonial Invst. Tst. Ln. 3½pc
Garton Engineering Ln. 4¼pc
Genbnance N.V. Fltg. Rate Notes due 1987 US$380.23
Goldman (H.) Gp. Ln. 4⅝pc
Gordon Hotels 5½pcPf. 1.925pc
Grand Metropolitan Hotels (Scot.) 5pcPf. 1.75pc
Greenfields Leisure 1.31p. 10pcPf. 5pc
Guildhall Prop. 6pcPf. 2.1pc
Hanimex Cpn. 4.5cts
Haynes Publishing Gp. 5p
Heavitree Brewery 11½pcPf. 5.75pc
Heinz (H. J.) 4½pcPf. 1.575pc
Heywood Williams Gp. 8pcPf. 2.8pc
Howden Gp. Dbs. 3¾. 4¼pc
Hudson's Bay 11.16p
ITT Distributors Db. 3½pc
Imperial Gp. Lns. 3.45, 3.75, 4, 5.25pc
Investing in Success Equities 3.7p
Islington 12¾pcRed. 1983-84 6⅜pc. 12¾pc Red. 1986-87 6⅜pc
Jackson (William) Son 7½pcPf. 2.625pc
Johnson Matthey Db. 3⅝pc
Keelavite 6½pcPf. 2.275pc
Kensington and Chelsea 11¾pc Red. 1985-1987 5⅞pc
LRC Intnl. Ln. 4pc
Lamont 6pcPf. 2.1pc
Land Securities Inv. Tst. Dbs. 3(88-93) 3¼pc
Latham (James) 8pcPf. 4pc
Lead Industries Grp. 7pcPfd. 2.45pc
London and Scottish Marine Oil Production 38.8322p
London Shop Property Tst. 1p. 5½pcPf. 1.925pc. Ln. 3¼pc
London Tst. Dbs. 1¼ 2 2¼(78-83) 2¼pc (83-88)
Lonrho Lns. 4¼(80-83) 4¼pc(81-84)
Lookers 2.45p
Low and Bonar Ln. 6¼pc
Lowe (R. H.) 6½pcPf. 2.275pc
MEPC Compulsory Conversion of the 5pc Ln. or repayment at par with Accrued Interest to 30/4/81
Macanie (London) Lns. 3¼ 3¾pc
Marchwiel 9pcPf. 4.5pc
Marley Db. 3¼pc
Massey Ferguson Ln. 3¼pc
Menzies (John) Db. 3¼pc
Metal Closures Grp. 6pcPf. 2.1pc
Miller Rayner and Maysam 10pcPf. 3.5pc
Newarthill 8¼pcPf. 2.8875pc
North (James) and Sons Ln. 3¼pc
Pifco Ord. and A Ord. 1.76p
Plessey Connectors Db. 3¼pc
Portsmouth and Sunderland Newspapers 8pcPf. 2.8pc
Priest Marians 6pcPf. 2.1pc
Radio and Allied Db. 3¼pc
Rand London Coal Ptg. Pf. 4.25cts
Rank Organisation Ln. 5¼pc
Ranks Hovis McDougall Ln. 5¼pc
Ransome Hoffmann Pollard Ln. 4pc
Renwick Gp. 4.9pcPf. 2.45pc
Rosedimond Invst. Tst. Income 3p
Saga Holidays 3.2p
St. Helens 11¼pcRed. 1985 5⅝pc
Samuel (H.) Dbs. 2¼ 3¼pc
Scottish Newcastle Breweries 5½pcPf. 1.925pc. 7¾pcPf. 2.7125pc. Dbs. 2¾. 3. 3¼. 3¼. 3⅝pc
Scottish Invst. Tst. Dbs. 2. 2¼. 2½pc
Sedgwick Gp. 3p
Shaw Carpets 10pcPf. 5pc. Db. 4¼pc
Ship Mortgage Finance Db. 3pc
Southerns-Evans Db. 4pc
Steinberg Gp. 5pcPf. 1.75pc
Tate Lyle Ln. 6½pc
Texaco Intnl Financial Cpn Ln. 2¼pc
Tozer Kemsley Millbourn Hldgs Ln. 4pc
Transamerica Cpn 32cts
Triplevest Income 3.156p
Truman Db. 2pc
Trusthouse Forte Dbs. (84-89) 6.12pc. (85-90) 3.12pc. 3.62. 5.25pc. Ln. 4.55pc
Tweefontein Utd. Collieries 97cts
Valor 5¼pcPf. 2.625pc
Waverley Cameron 6pcPf. 2.1pc
Westminster Country Props. 1.25p. Ln. 4pc
Westpool Invst. Tst. Ln. 2½pc
Whittingham (W.) 4.5p. 7½pcPf. 2.625pc. Ln. 4pc

FRIDAY, MAY 1
COMPANY MEETINGS—
Banro Consd. Inds., Belfry Hotel, Sutton Coldfield, 12.00
Dufay Bitumastic, Winchester House, 100, Old Broad Street, EC, 12.00
London and Manchester Assurance, Winslade Park, Exeter, 12.30
Lyon and Lyon, Harker House, Knottingley, 12.15
Mount Charlotte Invs., Grange Hotel, Harrogate, 12.00
Noble and Lund, Northern Machine Tool Works, Felling, Gateshead, Tyne and Wear, 10.00
Oliver (George) (Footwear), Murrayfield Road, Braunstone, Leicester, 12.15
Transport Development, Great Eastern Hotel, Liverpool Street, EC, 12.00
BOARD MEETINGS—
Finals:
Ayrshire Metal Prods.
Boot (Henry)
Cole (R. H.)
Hammerson Property and Inv. Tst.
House Property Company of London
Laing (John)
Liberty
Moss Bros.
Save and Prosper Linked Inv. Tst.
Interims:
Kwik Save Discount
Samuel Properties
Transvaal Consd. Land and Explrn.
DIVIDEND & INTEREST PAYMENTS—
APV Hldgs. 3.15pcPf. 1.575pc. 4.55pcPf. 2.275pc. 5.25pcPf. 2.625pc
Agricultural Mortgage Corp. 16½pcBds. Red. 1/5/81 £8.3275. 16½pcBds. 1/5/81 8¼pc
Allen Harvey and Ross 13p
American Medical International Inc. 16cts
Aquis Securities 0.6p
BET Omnibus Services 5½pcPf. 1.925pc
Bahia (State of) 5pc Gold Ln. 1904 Plan A (1¼pc) 2½pc
Banro Cons. Inds. 5pcPf. 2.5pc
Bassett (Geo.) 7½pcPf. 2.625pc
Beatson, Clark 5p
Bell and Sime 5pcPf. 1.75pc
Birmingham 13pcRed. 1983 6½pc
Black (Peter) 1.54p
Boulton and Paul 5pcPf. 1.75pc. 5½pcPf. 1.925pc. 7pcPf. 2.45pc
Bracken Mines 30cts
Bristol 3½pcDb. 1¾pc. 7¼pcRed.Db. 3⅝pc. Variable Rate Red. 1982 £7.5200
British Electric Traction Db. 2¼pc
British Gas 3pc Gtd. 1985 1½pc
British Inv. Tst. 5½pcPf. 1.8375pc
British Mohair Spinners 6pcPf. 2.1pc
British Shoe Corporation 6½pc 3rd Pf. 2.275pc
Cameron (J. W.) 5pcPf. 1.75pc. 6pcPf. 2.1pc
Chase Manhattan Corp. Cov. Cap. Notes due 1993 2¼pc
Citicorp 39cts
City Investing Co. 40cts. US$2Pf. Series B 60cts
Coates Bros. 4½pcPf. 1.575pc
Continental Illinois Cpn. 45cts
Courage Dbs. 3¼. 3⅝pc
Crouch Gp. 1.075p
Daniell Sons Breweries Db. 2¼pc
Derwent Valley Light Railway 10p. 5pcPf. 3.5pc
Dominion General Tst. 5pcPf. 1.75pc
Drake Scull 3.5pcPf. 1.75pc
Drayton Consolidated Tst. Db. 2¼pc
East Lancashire Paper Gp. 1.84p
Edinburgh Invst. Tst. Db. 3¼pc
Electric General Invst. Db. 2¼pc
Ellerman Lines 6¼pcPfd. 2.1875pc. 4½pc Pf. 1.575pc. 5½pcPf. 1.925pc
Ferranti 3.85pcPf. 1.925pc
First Scottish American Tst. Db. 1¼pc
Funding Ln. 6½pc (85-87) 3¼pc
General Stockholders Invst. Tst. 5½pcPf. 1.925pc
Glaxo Hldgs. Ln. 3¼pc
Gossard 5½pcPf. 1.925pc
Great Northern Invst. Tst. Db. 2¼pc
Guaranteed 4½pcBds. 2¼pc
Hardys Hansons 5pcPf. 1.75pc. Db. 2pc
Harrisons Malaysian Estates 2.5p
Hellenic General Tst. Db. 2¼pc
Henekey's 7½pcPf. 2.625pc
Hungary 7½pcStlg.Bds. (Assd.) 3¼pc
International Invst. Tst. Db. 2¼pc
Investment Tst. Guernsey 7p
Islington 10pcRed. 82-83 5pc
King and Shaxson 5pc 1st Pf. 1.75p
Kinross Mines 80cts
Lawtex 1p
Leeds Fireclay 1st Dbs. (Regd.) 2pc
Leslie Gold Mines 29 cts
Lewis (John) Properties Db. 4¼pc
London and Holyrood Tst. Db. 2pc
Londonderry (Port of) 3½pc Con. 1¾pc
M and G Extra Yield Fund Income 3.1p
McCaw, Stevenson and Orr 5pcPf. 1.75pc
Marks and Spencer 10pcPf. 3.5pc
Marshalls (Halifax) 10pcPf. 5pc
Maynards P.L.C. 3.125p
Merchants Tst. Db. 2pc
Mills and Allen 6½pcPf. 2.275pc
Mixconcrete 2.5p
Montreal (City of) 3pc Perm. Db. 1½pc
Moorside Tst. 5pcPf. 1.75pc
Mountleigh Grp. 1p
Nicor Inc. Com. 71cts
Noble and Lund 0.8125p
Northern American Tst. 5½pcPf. 1.75pc. Db. 1¼pc. Ln. 2½pc
Norwich 3pc Red. 1½pc
Nottingham 3pc Stk. (Irrd.) 1½pc
Packland Textile 4½pcPf. 1.575pc
Pentos 4½pcPf. 1.575pc
Pernambuco (Recife) 5pc Gtd. Ln. Bds. (Plan A) 2½pc
Platignum 6pcPf. 2.1pc
Property Reversionary Inv. Corp. 5pcPf. 1.75pc
Raine Engineering Industries 0.03p
Ratcliffs (Great Bridge) 0.75p
Reading 3½pc Stk. 1978 (or after) 1¾pc
Reckitt and Colman Db. 3¼pc
Reed Publishing Hldgs. Dbs. 1¼ 3¼pc
St. Helena Gold Mines 330cts
Scottish Agricultural Secs. Cpn. 3½pcDb. 1963-93 1¾pc. 13pcDb. 1997-99 6½pc
Scottish Invst. Tst. 3.5pcPfd. 1.75pc. 3.85pcPfd. 1.925pc. 4.55pcPf. 2.275pc
Smith (W. H.) Son Db. 2⅝pc
South Africa 9½pcRes. 1979-81 4¾pc
Southampton Harbour Board 6½pcRed. 1982 3¼pc
Squirrel Horn 0.8125p
Stock Exchange Dbs. £4.25 Red. Anns. (Reg.) £2.12
Stockholders Invst. Tst. Db. 2½pc
Trans-Oceanic Tst. 5pcPf. 1.75pc
Treasury Ln. 6¾pc 1995-98 3⅜pc
Triefus 20pcPf. 7pc
Tunnel Hldgs. 3.5pcPf. 1.75pc. 3.85pcPf. 1.925pc
Union Intnl. 7pcPf. 2.45pc
Unkel Gold Mines 40cts
Uruguay 3½pcBds. (Assd.) 1¾pc
Vaux Breweries 7pcPf. 2.45pc. 4½pcAPf. 1.575pc. 6½pcAPf. 2.275pc
Walker (James) Goldsmith Silversmith Ord. N.V. 1p
Walker (Thomas) 0.1675p
Watmoughs (Hldgs.) 3.75p
Watney Mann Truman Hldgs. Db. 3¼pc
Watney Mann Truman Lns. 2½. 4¼pc
Whitbread 4½pcPf. 1.575pc. 6pcPf. 2.1pc. 7pcPf. 2.45pc. Db. 2¼pc
Winkelhaak Mines 220cts
Witan Invsts. Dbs. 2. 2¼pc
Wrighton (F.) Sons 5½pcPf. 1.025pc
Young Brewery Db. 3⅝pc

SUNDAY, MAY 3
DIVIDEND & INTEREST PAYMENTS—
Treasury Ln. 15¼pc 1996 7⅝pc
Treasury Stk. 12pc 1987 6pc

Weekend detention urged

THE GOVERNMENT is being urged to introduce weekend detention on an experimental basis as part of a plan to reduce the size of the prison population.

The call comes today from the British Association of Social Workers, which argues in a policy statement that such a scheme would be cheaper than traditional imprisonment, enabling those sentenced to continue working and supporting their families.

It also calls for legislation to reduce maximum sentences, a quota system to ensure that the certified normal accommodation of each prison is not exceeded, and stricter criteria for imposing prison sentences.

UK NEWS

Ambulancemen's eyes on public opinion in pay dispute

Pauline Clark reports on choices facing union leaders

WHEN UNION leaders of Britain's 17,000 ambulancemen meet on Wednesday to consider the next move in their dispute with the Government over its 6 per cent health service wage ceiling, they will be wondering if they can carry public sympathy with them.

The threat of industrial action by ambulancemen has grown this week after rejection of a 6 per cent offer by 9,000 votes in a ballot of 10,000 ambulancemen in the National Union of Public Employees and some 1,600 rejections in a separate ballot of London's 2,200 ambulancemen.

Public toleration

Further substantial rejections are expected this week from a similar ballot by the Confederation of Health Service Employees and from branch consultations by the General and Municipal Workers Union.

The moral sensibilities of the British citizen have already been assaulted this year by civil servants' action affecting the defences of the country.

Ambulancemen's negotiators will be aware that at a time of high unemployment, their problems in securing public toleration for industrial action in what is commonly seen as a life and death service will be greater than it was for the firemen in their 1978/79 strike.

There are already divisions of opinion among union officials. While one side privately feels there can be no joy in "throwing cotton wool balls at the windows of Downing Street" (windows that have proved so resilient to the mighty punches being thrown by Civil Service unions) another believes a relatively small group of essential service workers can prove a match for any Government given a good case with which to fight.

NUPE at least put itself in the front line by recommending rejection of the pay offer while making clear that the only alternative is likely to be industrial action.

The central argument for resisting a 6 per cent deal despite acceptance of settlements at a similar level by council workers and hospital ancillary workers this year rests on the case ambulancemen have been arguing for several years.

They say they should be recognised as providing an emergency service alongside police and firemen and that this should be reflected in their pay.

The issue is emotive for many ambulancemen. Over the past two weeks they have pointed to their experiences in the Brixton riots when two ambulancemen were injured.

They describe graphically the risks taken by those of their number obliged to cross the firing lines to reach casualties.

But just as importantly, the argument has gained force this year in the wake of the 21 per cent pay award last September to police and the 18.8 per cent two-stage index-linked deal for firemen in November.

Ambulancemen say this leaves their average basic wage after 15 years service at £78.90 a week compared with £128 for police and £111.05 for firemen.

This grievance was at the centre of the ambulancemen's pay dispute which led to national action in 1979 and no doubt would have led to further trouble last year had it not been for the 12.8-25.8 per cent increase in basic rates which followed the Clegg comparability exercise.

From the employers point of view, however, the argument has serious weaknesses. While there may be some appreciation of the historic links between firemen and ambulancemen established before the health authorities took over the ambulance services, management contends that emergency work by ambulancemen accounts for only 10 per cent of their activity.

The bulk of their work is seen as operating a taxi service for hospital outpatients, especially old people, to and from their homes.

The union view is that firemen, like police, spend a large part of their time in routine work but that ambulancemen are also trained to cope with emergencies and are normally expected to respond to emergencies when they arise.

The pay comparison issue is similarly complex. Neither police nor firemen have the same opportunities as ambulancemen to boost their wages through bonus, shift and other ancillary payments since financial recognition of the special demands made on them is largely integrated in their basic wage structure.

Average earnings for most ambulancemen will exceed £100 a week although at the cost of working long and unsocial hours. Twelve to fourteen hours overtime a week is said to be common for ambulancemen in metropolitan areas, yielding average earnings of £164 a week.

About 20 per cent of ambulancemen's earnings is said to be represented by overtime payments and more than 10 per cent by shift and other premiums.

If there is a negotiable way out of the present dispute it could lie somewhere in the area introducing an all-in salary for qualified ambulancemen similar to the structure that operates for police and firemen as recommended by Clegg. There have been no serious negotiations with unions on the proposition, however, and union negotiators are unlikely to make the first move.

Regional and area health authorities operating ambulance services have not cleared up the ragged system in many parts of the country where ambulancemen benefit from widely differing kinds of bonus and premium payment systems. Indeed the jealousies and difficulties created by this are believed to have contributed to the discontent among ambulancemen in recent years and no less to the present problems over pay.

Ambulance service negotiators expect major pockets of resistance to an integrated system from ambulancemen who do well financially out of supplementary payments.

The West Midlands Regional Health Authority has achieved an integrated system but only as a result of the 1978 dispute in its ambulance service over bonus payment variations and anomalies which resulted in industrial action.

More recently the Trent Regional Health Authority clashed with its ambulancemen over the introduction of a tidier bonus scheme—an issue which led to a seven-day strike last January.

There is also dissent among employers, some of whom see advantages in retaining incentive payments to improve productivity in non-emergency ambulance work.

Over the past two weeks, however, London ambulancemen have argued strongly a further case for increasing ambulance service pay on the basis that the labour resources of the London Ambulance Service are failing increasingly to meet the demands made upon them.

In May last year, the conveners' committee of the LAS published a report which said that as a direct result of the service's inability to compete in the labour market, 1,116 lives were being put at risk in London streets each year.

Growing demands

The London group argues that while Department of Health standards require 50 per cent of emergency calls to receive a response in seven minutes, the LAS achieves that response in only 32 per cent of cases.

Although unemployment has boosted recruitment recently, the London ambulancemen say the LAS is 500 short of its operational establishment.

They argue that with the growing demands on the service's out-patient transport operations arising from the effects of hospital cuts, a "critical" situation has been reached.

"It's not really a fight for more money for our own pockets," said Mr. Terry Pettifer, one of the London conveners. "It's all about what we feel when we get to a road accident too late."

UK NEWS—LABOUR

Rail union chiefs seek arbitration

BY JOHN LLOYD, LABOUR CORRESPONDENT

RAILWAY union leaders intend to refer their claim for a 13 per cent pay increase to arbitration at a joint meeting of the three rail unions tomorrow.

The unions have rejected a 7 per cent pay offer from British Rail, but are convinced that the BR board will not increase its offer.

The industry's arbitration body, the Railway Staff National Tribunal, is a three-man body chaired by Lord McCarthy. Either unions or BR may refer issues to it, and its recommendations, while not binding on either side, tend to be followed.

Mr. Ray Buckton, general secretary of the train drivers' union ASLEF, said that he intended to argue for referral of pay to the tribunal.

Mr. Sid Weighell, general secretary of the National Union of Railwaymen, said that the issue of referral would be "high on the agenda" of the meeting.

Senior union officials believe that the tribunal might improve *the pay offer to the 250,000 railway* staff to around 8 or 9 per cent, a figure which would probably be accepted by the unions.

The unions have insisted that the rise should contain no productivity element, *but have said* that they would be willing to talk about productivity in another context.

However, the officials are concerned that Government will take a hard line over pay, using what they would see as a high settlement as a trade-off against funds that might otherwise go for the BR electrification programme and other capital investment.

The BR corporate plan, and the electrification programme, has already been discussed at least once in Cabinet committee, and it is thought no decision has yet been reached.

Mr. Weighell said last night that "while they are taking a long time to make up their minds, the railway system is collapsing."

He added: "There are 10,000 vacancies they can't fill and excessive overtime is being worked. The Government has to decide now whether it wants *a railway system or not. If it* doesn't, it should come out and say so."

Windscale action threat

BY OUR LABOUR CORRESPONDENT

WHITE-COLLAR workers at Britain's nuclear reprocessing plant at Windscale, with workers at other nuclear sites throughout the country, will strike on Wednesday.

The action, by the 7,000 white collar staff, is being taken in support of a "substantial" pay claim. Talks on pay broke down last Friday after the company refused to increase an offer of 6 per cent, which was described as "final."

Mr. Jim Hodgson, the British Nuclear Fuels staff side *secretary, said last night that* "the Windscale plant would be covered for safety. There would be no question of danger to the public."

The company confirmed last night that the unions had undertaken to carry out normal safety procedures. However, the action is expected to severely delay the reprocessing programme at Windscale.

The staff side, which is covered by five different civil service unions, have also announced a campaign of further selective actions, to begin from May 5. No details have yet been announced.

Mr. Hodgson said that the staff was looking for a settlement in line with other workers in energy industries, such as electricity and gas workers.

The action on Wednesday will also affect the country's first and second nuclear power stations—Calder Hall, in West Cumbria, and Chapel Cross, in southern Scotland, as well as the nuclear fuel production plant at Springfields and the nuclear fuel enrichment centre at Capenhurst.

However, the cessation of generation at Calder Hall and Chapel Cross — the only two nuclear stations operated by BNFL — is not expected to cause any break in supplies to consumers.

Government accused by president of USDAW

By Nick Garnett, Labour Staff

GOVERNMENT Ministers were accused yesterday by a union leader of shedding crocodile tears while tearing away at living standards "with crocodile teeth."

Mr. Sydney Tierney, *president* of the Union of Shop, Distributive and Allied Workers, told his union's annual conference at Blackpool that the Government was creating an "abyss of industrial depression.

"The Tories diminish human dignity as they degrade those *least able to protect themselves,"* he said in one of two attacks launched by the unions yesterday against Government policies.

"Thatcherism *is* an unmitigated disaster, destroying our economy, leading us to nowhere."

Mr. Tierney said the Government's *claim that working* people accepted their policies and that the message was getting through, was false.

"We are not prepared to accept low settlements, and cuts in standards in deference to Tory monetarism. We will continue to resist the Government's diabolical attempt to control wage levels through fear of unemployment."

Mr. Tierney said his union had lost 20,000 members *in the year to the end of 1980, but* other unions had suffered even more.

The second union attack was levelled by the Association of Professional, Executive, Clerical and Computer Staff.

Mr. Ken Smith, vice-president, said at the union's annual *conference in Southport* that monetarism was creating "a poison of bitterness throughout a generation of attitudes."

He said there was little wonder, "we have the Bristols and the Brixtons."

Monetarism and the effects of other Government policies were being used against trade union power and rights.

The APEX conference passed a motion demanding the trade union organisation of the unemployed "including through TUC regional councils and trades councils, trade union advice centres the maximum resistance to closures and *large-scale redundancies* as well as the involvement of unemployed workers and school-leavers in campaigns for jobs."

Power engineers say employers ignore no-strike pact chance

BY PHILIP BASSETT, LABOUR STAFF

PAY TALKS for the 28,000 power engineers, one of the most powerful industrial groups, have run into difficulties over what the engineers' union sees as the employers' refusal to apply fully a formula which, the union claims, should virtually act as a no-strike agreement.

Leaders of the Electrical Power Engineers' Association, whose members control supply of electricity from power stations, draw parallels between their position and that of the firemen who went to the brink of national strike action over their pay formula.

Moderate

The union has been careful so far in the negotiations to avoid talking of industrial action. It is recognised in the union that the idea of action may be considered at an executive meeting on May 20 if the Electricity Council does not make a "realistic" offer at talks the previous day.

The union has not taken action since 1973, *though it came close in 1975 and two* years ago. The membership is traditionally moderate, and its leaders approached Mr. James Prior, the Employment Secretary, soon after the Government came to power to see if there might be ways in which the union could take up *the Conservative's election* campaign suggestions of formal no-strike agreements for key workers in essential services.

The formula links engineers' pay to rises won by the industry's manual workers. They settled eariler this month for a deal giving 10.8 per cent, with increases *in shift* and *standby* payments, and an hour off the working week. The deal was put overall as worth about 13 per cent.

The Electricity Council then offered the engineers a deal giving 10.8 per cent at the point of comparison with manual workers. A *manual foreman on* £6,503 before this month's deal is linked to engineers earning £6,480 at point 9 on the engineers 39-point scale, but tapering the offer to 6.5 per cent at *the top of the scale to give an* average of 7.6 per cent.

The bulk of Electrical Power Engineers' Asociation members are above point 9 and earn between £5,925-£8,905 and £9,215-£12,805.

The union rejected the offer. The employers then increased *the offer to an average of 8.7* per cent, tapering at the top to 6.8 per cent.

Link point

This they say maintains the formula by offering 10.8 per cent at the link point. The union wants the 10.8 per cent applied throughout, as was last year's linked increase.

The employers claim that the supply engineers are overpaid compared with outside industry. *The union is highly critical of* the employers' choice of a salary survey.

The union is pressing for its members to be able to implement a one-hour-a-week reduction due in November by building up the hours into six days off a year. It calculates that the reduction of one hour may be worth a further 1 to 1½ per cent.

Call for strike at shipyards

By John Lloyd, Labour Correspondent

SENIOR shop stewards from throughout British Shipbuilders have called for national strike action if the company does not withdraw 106 redundancy notices.

The call, from the militant Shop Stewards' Combine Committee, came in Carlisle at the week-end. An official overtime ban in the company's yards begins today.

The ban was called last week by the shipbuilding negotiating committee of the Confederation of Shipbuilding and Engineering Unions. It will continue until next Tuesday, when the committee meets to review the position.

Union leaders fear that the company will also call for the closure of the Robb Caledon yard in Dundee, and possibly a further small yard, with the loss of 300 jobs.

They believe the company is insisting on the compulsory sacking of the 106 workers as a matter of principle, rather than on purely economic grounds.

The initial number on the redundancy list was 628, but most of these have taken voluntary redundancy in the past few months.

Plea to raise TV licence fee

UNION leaders made clear yesterday that broadcasting staff will continue to press for a big increase in the TV licence fee. They itervened after delegates *at the annual conference of the* Association of Broadcasting Staff threw out a motion on Saturday calling for a new fee to enable the BBC to maintain and improve services as well as giving bigger pay increases to staff.

Delegates opposed to the *motion said a new way of financing* the BBC was needed.

Mr. Tony Hearn, general secretary of the ABS, admitted at the conference session that there had been some confusion over the motion.

He said: "Conference this morning accepted by an overwhelming *majority a statement* by me of what the national executive committe wants . . . we shall continue to do everything we can to get as large an increase in the licence fee as possible."

BUSINESSMAN'S DIARY

UK TRADE FAIRS AND EXHIBITIONS

Current	Incentive Marketing and Sales Promotion Exhibition (01-688 7788) (until April 29)	Metropole Exhn. Hall, Brghtn.
Current	Storage, Handling and Distribution Exhibition (01-446 2411) (until May 1)	Earls Court
Apr. 28-30	Leather and Associated Trades Show (01-407 1582)	NEC, Birmingham
Apr. 29-May 17	International Ideal Homes Exhibition (021-705 6707)	NEC, Birmingham
May 5-8	London International Building Products and Services Exhibition (01-540 1101)	Olympia
May 10-12	British Craft Trade Fair (0282 867153)	Harrogate
May 12-14	Defence Components Expo (01-839 5041)	Metropole Exhn. Hall, Brghtn.
May 13-14	Scottish Contract Flooring Exhibition (01-236 0911)	Ingliston, Edinburgh
May 17-20	Wholesale Buyers' (Spring) Gift Fair (01-855 9201)	Olympia
May 17-21	London Furniture Show (01-385 1200)	Earls Court
May 17-21	Interior Design International '81 (01-540 1101)	Olympia
May 19-21	MEX '81 (021-643 6994)	Granby Halls, Leicester
May 20-21	Print Fair '81 (01-253 9355)	Bloomsbury Centre Htl., WC1

OVERSEAS TRADE FAIRS AND EXHIBITIONS

Current	International Spring Fair (01-486 1951) (until April 28)	Zagreb
Current	Swiss Industries Fair (Telex 62685) (until May 4)	Basle
Apr. 29-May 3	International Forestry Fair — EUROFORESTA (01-458 4860)	Verona
Apr. 28-May 3	International Exhibition of Contemporary Arts—SINVAL (01-486 1951)	Bilbao
May 4-9	8th International Surface Treatment and Industrial Finishing Exhibition (01-493 3964)	Paris
May 14-17	International Antiques Fair (01-540 1101)	Antwerp
May 19-22	International Energy Management Exhibition and Congress—ENERGY (0727 63213)	Essen

BUSINESS AND MANAGEMENT CONFERENCES

Apr. 29	LCCI: The Advantages and Hazards of Exporting to Saudi Arabia (01-248 4444)	Cannon St., EC4
Apr. 28	The Marketing Society: *Reviewing and improving* your marketing activity (01-487 5811)	London Press Centre
Apr. 28-29	International Maritime Arbitration Organisation: International Maritime Arbitration Symposium (Telex 280282)	Paris
Apr. 30	Institute of Directors: *Unfair Competition—The* trade barrier of the 80's (01-839 1233)	Pall Mall, SW1
Apr. 30	Food Forums: Food Product Liability Seminar (01-486 6757)	Inn on the Park, W1
Apr. 30	IPS: Successful Trading in Commodities, Money and Foreign Exchange (0990 23711)	*De Vere Hotel, Coventry*
May 6-7	Crown Eagle Communications: Communications at Work Seminar (01-636 0617)	Royal Garden Hotel, W8
May 7-8	Strategic Marketing Computers: Security and Disaster Contingency (01-373 5115)	Penta Hotel, SW7
May 8	New Opportunity Press: *Law at Work '81 (01-444* 7281)	Birkbeck College, London
May 11-12	The Economist—Video Conference (01-839 7000)	National Film Theatre
May 11	Malaysian Industrial Development Authority: Malaysian Investment Dialogue (01-493 0616)	The Churchill Hotel, W1
May 13	FT Conference: Traded *Options—a new dimension* for UK investors (01-621 1355)	Mark Lane, EC3
May 14-15	FT Conference: World Banking (01-621 1355)	
May 14	The Textile Institute: Fabrics and Finishes for Workwear (061-834 8457)	Novotel, Bradford
May 16	Thames Polytechnic: *How to start your own* business (01-854 2030)	Woolwich, SE18
May 18-19	Government Research Corp.: World Gold (01-370 3176)	Guildhall
May 19	Dun and Bradstreet: Understanding Credit and Collections—for *collection personnel (01-247* 4377)	Portland Hotel, Manchester
May 20	University of Leeds: Reducing Industry's Transport Problems (0532 35036)	Leeds
May 21	European Study Conferences: Tax planning and management of stock relief *in the light of* the Finance Bill (057282 2711)	Selfridge Hotel, W1
May 21	Comprimo: Chemical Industry in the years 1985-2000 (31 20 598 3211)	Amsterdam
May 26	Industrial Relations Briefing: Sick pay scheme—the changes (01-289 1158)	London
May 28	The Institution of Taxation: Finance Bill '81 (01-235 8847)	Royal Lancaster Hotel, W2
June 1-2	Management Centre Europe: Do the old rules still apply? (Belgium 2190390)	Brussels
June 1-2	FT Conference: The role of international companies in Saudi Arabia's development plans (01-621 1355)	Grosvenor House, W1
June 1-2	FT Conference: Energy supplies—feast or famine? (01-621 1355)	Hilton Hotel, W1

Anyone wishing to attend any of the above events is advised to telephone the organisers to ensure that there has been no change in the details published.

TECHNOLOGY

EDITED BY ARTHUR BENNETT AND ALAN CANE

ICI material may move into Space

A POLYETHERSULPHONE material made by ICI at its Hillhouse plant in Lancashire is now being evaluated as a basic orbital construction material for possible use in the U.S. Space Shuttle programme.

Specmat, an ICI customer in business as a high-performance materials development company serving the aerospace industry, has received an order from the Grumman Aerospace Corporation for carbon-fibre (graphite) reinforced ICI Victrex roll-stock required for tests on Grumman's Automated Beam Builder (ABB).

The ABB is destined to be carried aloft by future shuttles to "extrude" triangular latticework beams for building large-scale orbiting structures.

It is expected to play a crucial part in the eventual exploitation of space, initially for communications and for the collection and transmission to Earth of solar energy.

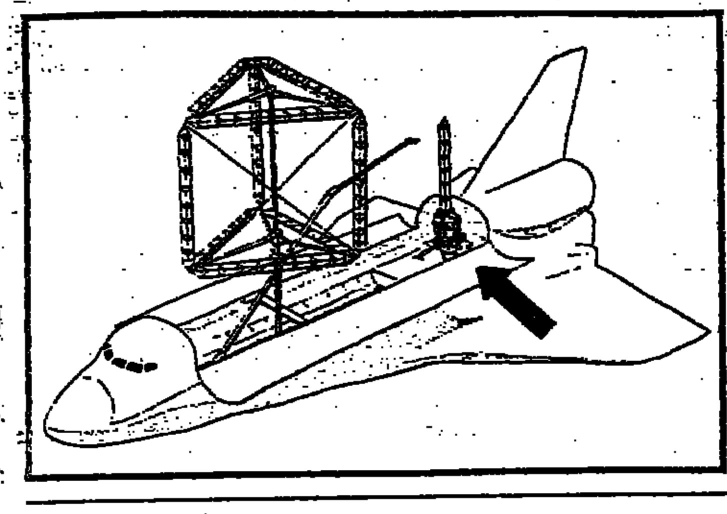
Carbon-fibre reinforced Victrex is claimed to possess high strength and an excellent stiffness/weight ratio at temperatures up to 200 degrees C, while at temperatures as low as minus 100 degrees C it retains a useful impact resistance.

It can be readily thermoformed from flat strips, a process used in the ABB to increase the rigidity of the basic structure.

Rolls of carbon-fibre reinforced polyethersulphone are fed past heaters and through formers to produce three parallel profiles. These are then linked together into a latticework beam by reinforced Victrex members formed at angles to the machine's main axis.

The probable position of the Automated Beam Builder in the cargo hold of the space shuttle is indicated in the diagram.

Specmat, an associated company of H. R. Smith Technical Development, is based at Witney, Oxon. (0865 882110).



Signing on the dotted line

BY ALAN CANE

FRESH OUT of cash in a strange country and missing your cheque book, you go to the nearest branch of the local bank.

You present your credit card to the cashier who runs it through a small device on the counter and invites you to sign your name on an innocent-looking plastic pad.

Within seconds, the device gives the electronic equivalent of "That'll do nicely" and the cashier, satisfied with your identity, gives you the money.

Equipment which confirms that you are who your signature says you are already exists —and at prices which are beginning to make it an economic option for banks, retail stores, high security installations and the like.

Within a few years, signature verification looks likely to revolutionise credit card and security businesses.

Next week, at the National Computer Conference in Chicago, the biggest exhibition of data processing equipment in the world, two UK companies, already the market leaders in this technology, will make their first assault on the U.S. market.

Interest from banks and credit card organisations is already high. One U.S. credit card company lost US$900m from fraudulent use of its cards in 1979 alone.

Figures for the UK are hard to come by, but the impression is that the British are even less security conscious than the Americans.

First in the field was Transaction Security, a company little more than 12 months old, founded with capital from Finance for Industry. Just two months ago it was given a further £50,000 by Technical Development Capital to help market its product, the Verisign II.

Quest Automation, a Dorset based specialist in industrial automation will actually be launching its product, PI Micropad, at the NCC. Quest is already well known as a pioneer of techniques for using hand-written information as computer input.

The technologies employed by the two companies to turn signatures into streams of information that a computer can understand are quite different, but both started from the same point; a concept of how to verify signatures developed at the National Physical Laboratory in Teddington.

Although both have massively refined the computer instructions devised at NPL, the principle remains the same: a signature can be recognised as unique to one individual both through its shape and the fashion in which it is written. In other words, a signature is a fingerprint in time and space.

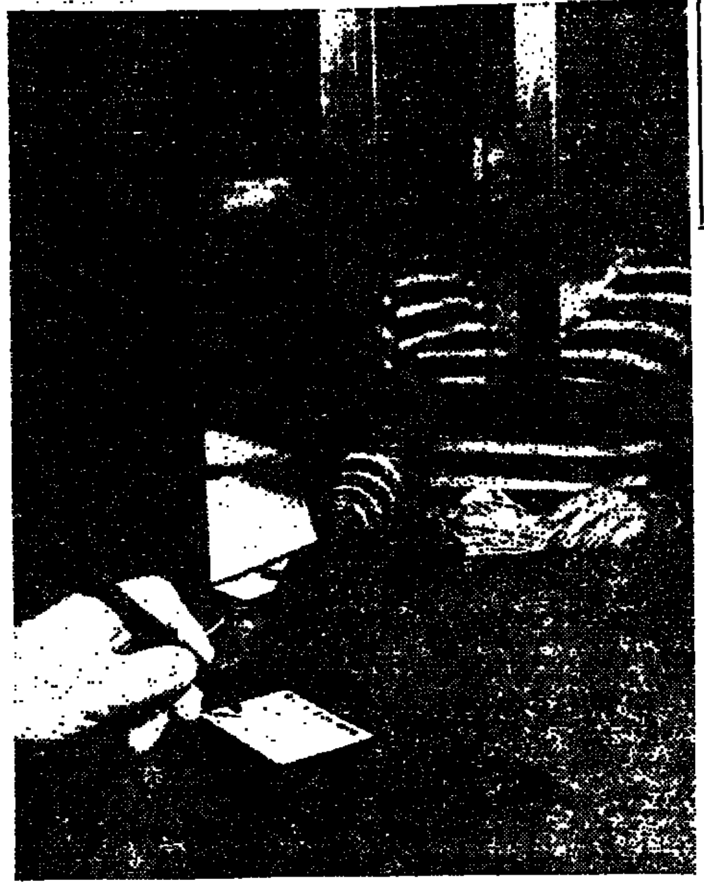
Mr. David Law, managing director of Transaction Security points out: "The old style forger could match shapes; the modern forgers will have to master speed and pressure as well. It means thinking of 16 things at once."

"We are still looking for a forger expert enough to beat the system," he claims.

The market possibilities for a foolproof system of personal identification are so enormous that it is surprising that Transaction Security and Quest have such a lead.

IBM was reported three years ago (see this page, September 28, 1978) to be working on a pen with speed, pressure and directional sensors, but has yet to bring a product to market.

Stanford Research Institute is also researching the area (and both organisations have been to talk to NPL!)



An innocent looking plastic pad invites you to sign your name and, if satisfied, gives you the money

The Transaction Security device is microprocessor based and uses electromagnetic sensing; complete with magnetic card reader, display, and keyboard it costs about £4,500, a price which is expected to drop sharply on volume production.

The Quest PI Micropad is a software extension of its well known Micropad resistive surface technology; each unit without card reader is expected to cost under £2,000.

Both companies say only five specimens are necessary for the system to build up a forger proof impression of a signature.

The present range of applications includes computer access and high security area access control systems, credit authorisation systems and point of sale terminals.

Both companies will sell the guts of the system—the signature recognition part — to systems builders for under £1,000.

Transaction Security has sold its system to GTE, the U.S. operator of Telenet, the data communications network.

It is also planning to squeeze its whole system onto a single silicon chip. It opens the possibility of writing down the telephone line for all manner of shopping from Shredded Wheat to shares. And the identity of the shopper will never be in doubt.

Transaction Security is on 0483 503363; Quest on 0202 891518

Easy milk run on the farm

1981

SIMPLICITY in design and use won Ambic Equipment the Queen's Award for its mastitis detector.

Mastititis, inflammation of the udder in milk cows, costs the dairy industry about £50m a year. Infected milk cannot be sold and the condition, if untreated, can lead to loss of part of the udder or the death of the cow.

Mr. Reg Marshall and Mr. Peter Bullock, Ambic's directors, sought a method of detecting mastitis in its early stages which was cheap and could be used easily on the farm.

The earliest clinical symptom of the disease is clotting of the milk. This can be detected visually using a metal cup, or by chemical tests, but both are laborious, difficult to apply in the milking shed, and tend to be ignored.

The obvious answer, and one already in use was a filter in the milk line, but these tended to become clogged. Ambic designed a detecter filter costing less than £3.00 which could be fitted directly in the milk line, and which could be cleaned on the spot.

The herdsman simply slots the filter screen out of the side of the detecter body.

Blockage in a line filter is itself evidence of incipient mastitis, but Mr. Bullock explains that it upsets the vacuum in the milking system, causes the cluster of milking cups to fall onto the milking parlour floor and disturbs the rest of the herd —and the herdsman.

An added virtue is a bypass channel in the centre of the detecting filter which allows milk flow even if the screen is totally clogged.

The device has already won a Design Council Award (the first item of dairy equipment to do so). Exports from January last year total £250,000. Sales of the mastitis detector covered 20 per cent of all UK milking units within the first two years of its introduction.

Mr. Bullock says that the device is so cheap and so simple to use there is no reason why dairy farmers should not instal one in their milking lines.

POINTERS

Roll-marking

DESIGNED primarily for the high-speed marking of solenoid components, a new roll-marking machine introduced by SP Marking Products, Chard (04606 3747), is claimed to be equally suitable for marking cylindrical parts, which can be automatically or manually loaded.

It is fully automatic and parts can be permanently marked without distortion or stress, it is claimed. Operation is by compressed air with overall electrical control. Each part to be marked is gravity-fed into the locating fixture on the work table.

Pneumatic action moves the table from right to left, thus rolling the part beneath the die or marking type. At the end of the stroke the part is ejected automatically. The table then returns to the start position to receive the next part and the machine automatically re-cycles.

The machine can be set to mark three lines of data in one stroke at a cycle speed of five seconds. A typical mark may consist of a company logo and various data in 1/16-in characters occupying an area 1/4-in deep by 1 1/4-in long.

The typeholder is designed to accept individual interchangeable steel characters, solid engraved dies or a combination of both. For rapid changeover the typeholder is mounted on a dovetail fitting with a quick-release mechanism.

Coil-winding

SIMPLICITY of design combined with a degree of automation is claimed for a new coil-winding machine manufactured by the West German company, Aumann and marketed in Britain by Cole Equipment, Croydon (01-686 7581). Designated Type HKW/L30, the coil-winder is supplied with a two-station, manually operated indexing table which carries the coil formers.

The winding head can be fitted with face plates of different sizes to suit varying wire diameters and coil sizes. The machine is started by pressing a button, but the wire start is automatic. Winding speeds up to 13,000 rpm are possible, says Cole.

A new route through Grecian skies

Victor Walker reports on how the former head of a washing machine company aims to revive Olympic Airways

MANAGING an airline is little different from running a washing machine company. Both are subject to the same truths and the same principles of diagnosis, though the requisite treatment is obviously different.

So says John Piperoglou, a Greek company doctor who has just been appointed chairman of Olympic Airways, the country's national flag carrier. As a state enterprise the airline, previously owned by the late Aristotle Onassis, has been turning in increasingly hefty losses — a deficit totalling U.S.$74m over the past three years alone.

Piperoglou's task is to put the company on a firm business footing. Since the Government insists that a return of the airline to private ownership is out of the question, this means he has to find a way of grafting tougher management principles onto a hitherto unco-operative state enterprise.

A U.S.-trained manager who cut his teeth in oil multinationals, Piperoglou undertook a similar rescue operation three years ago when he took over Elinda SA, a domestic appliances group which had been put together with the help of the National Bank of Greece after the merger of two companies that had run into serious difficulties.

Piperoglou believes the root problem facing Olympic Airways, and many other Greek industries, is "the absence of ambitious but realistic targets expressed in simple words. To run an organisation you must identify a few key problems and turn them into easily understandable objectives which everyone can grasp," he says.

In Olympic's case, Piperoglou has identified two key problem areas around which his strategy revolves—labour indiscipline and poor aircraft utilisation. On the former there has been little progress so far but the company claims that aircraft utilisation has improved. In the short term Piperoglou is hoping to expand services without increasing the number of routes to any great extent—and without increasing its fleet.

To an unusual extent, Olympic is a microcosm not only of the traditional weaknesses of Greek business practice and industrial relations, but also of peculiarly public sector problems.

Public sector

The airline became part of the public sector in 1974 when Onassis, in failing health and after the death of his son in a plane crash, exercised his contractual right to require the Greek government to buy his shares.

Olympic had been born 18 years before, with a fleet of 15 Dakotas and a staff of 865 inherited by Onassis from the old Greek National Airways. By the time he left the scene he had turned it into an airline serving five continents, employing 7,400 staff and carrying just under 3m passengers a year.

But after his departure loss-making prestige routes were opened, like those to the Albanian capital, Tirana and Benghazi, while others, such as services to Australia and Canada, were dropped when the deficits finally became unbearable.

As for industrial relations, Olympic now employs 30 per cent more staff than when it was in the hands of Onassis. And customer confidence has repeatedly been sapped by strikes timed to coincide with peak-season travel.

There has already been one strike this year, carried through in defiance of a court order, and now there is a strong "smell" of disciplinary action in the air.

Piperoglou says Olympic has had a "particularly bad history of personnel relations." The reason, he argues, is that "for a company its size and complexity, Olympic has never had a strong personality in charge of personnel relations. Chief executives have involved themselves in union negotiations, which is a disastrous practice."

The keynote to Piperoglou's approach is labour discipline or, in his own words, "strict adherence to law and contractual obligations."

For this year's wage round the airline has offered a single 16.5 per cent increase back-dated to January. Staff have also been told that they will get, as a back-dated wage increase, one-third of any cut in the forecast $60m loss for this year—for example, if the deficit finally runs out at $42m, then $6m will be used to finance additional wage increases.

The whole package is now in arbitration, after rejection by the unions. But, says Mr. Piperoglou: "If we go on trying to give our personnel more than the company generates in terms of profit, there is no way this airline can be kept afloat."

But could Olympic, even with more effective personnel and all-round management, be put on a sound business footing? Piperoglou believes it could, even if it remains in the public sector.

"Though not in principle a supporter of Government enterprise, I consider it unfair to blame Olympic's troubles exclusively on Government ownership," he says. "The seeds of trouble had already been sown in the days of Onassis' ownership, which had been successful in running a 'boutique' (prestige) airline but was overcome by the demanding task of organising for the 1970s and 1980s. I'm not saying that management was any better under Government ownership, but it's unfair to blame it all on Government."

Piperoglou's confidence is based in part on the extent to which Olympic's problems are peculiar to the airline, and are simply worsened by the ailments currently common to virtually all carriers—sluggish demand, increasing fuel costs on the one hand, and the price of fleet renewal through acquisition of more fuel-efficient aircraft on the other.

In the first place Olympic has a relatively low average load factor—only 55 per cent last year. This, together with its high staff levels, has pushed productivity down to about 60 per cent of the IATA average. Last year the company's wage bill jumped a third, fuel costs soared by 40 per cent, while revenues rose only by just over a quarter.

One of Olympic's problems is that it cannot recoup from its exclusive domestic services what it loses on the more competitive international routes—without destroying tourism within Greece, and undermining the local economies of the towns and in particular the islands to which it flies.

"All Olympic routes are losing," says Piperoglou. "There is not one on which we make money."

An ambitious plank in Piperoglou's strategy is to see if this summer we can get the same number of flying hours per aircraft type per day as Lufthansa does." Lufthansa has been selected as a challenge because it is the only other European airline with as extensive a domestic network as Olympic's.

This involves a redesign of Olympic's route network, in terms both of frequencies and deployment of aircraft; the intention is to ensure that the type of aircraft and the frequency of the service really match the traffic on the route. Already, he says, the average load factor is up by about 10 per cent.


Airbus A-300s (above) are becoming a key feature of Olympic Airline's fleet. John Piperoglou (right), the new chairman, does not believe fleet renewal is an urgent problem.

Charters

An associated move is the introduction of four feeder lines to Salonica and to Kos, using Short 503-305s, of which Olympic has four. The possibility of buying more feeder aircraft is under consideration.

Piperoglou also wants to enter into charter work in a big way, in place of the present marginal operation. "There are about 80 per cent as many international charter flights in and out of Greece as scheduled flights," he says. "Olympic has about 25 per cent of international flights in and out. A reasonable expectation, which has been set as a target for 1983, is to capture a quarter of the charter traffic."

It had been planned to sell six Boeing 707s, after phasing them out as part of fleet modernisation. "Now we shall use these to wet our feet in charter business, replacing them with more fuel-efficient aircraft later." Spare capacity will also be used for charters.

In addition, Piperoglou wants to expand cargo services, now represented by one converted Boeing 707 flying a weekly Athens-Basle itinerary. There are no plans as yet to buy special aircraft. But there is spare capacity in Airbus holds and a boost is expected from the completion of a new freight terminal at Athens airport, planned for the end of this year.

"If our effort during the coming summer to stretch the utilisation of our aircraft succeeds, we may have licked the problem of turning this airline round. We have simply not been flying our aircraft enough," says Piperoglou.

This longer-term strategy involves the introduction of long-range flights to the U.S. west coast, Canada, Australia and the Far East, based on usage by Greek communities. For Australia and Canada, this would mean the resumption of services previously abandoned because of cost considerations. "We shall certainly not do it this year," says Piperoglou, "since the key to extending a network is the ability to do it in an efficient way, not just for the sake of showing the flag."

More immediately, the airline has started restructuring ground operations with a view to improving its poor punctuality record. Already, Piperoglou says, the average for on-time departures had been raised from 62.5 per cent to well over 90 per cent. A sustained 90 per cent punctuality level for arrivals and departures, he says, "will put us among the best in the world, save aircraft and crew time, and above all improve our image with our customers."

With the 31 aircraft Olympic fleet built around "two of the most fuel-efficient aircraft in the world" — nine Boeing 737s and five Airbus A-300s, with three more Airbuses on the way — and the rest consisting of Boeing 747s, 707s, and 727s plus three Nihon YS-11s due to be phased out this year, Piperoglou believes that fleet renewal is not an urgent problem.

Piperoglou says 1982 will be the critical year for Olympic, since "things we are now talking about will have been implemented by then." But this presumes "and I absolutely refuse to be pessimistic" — that sound management principles can successfully be grafted onto a Greek state enterprise.

How employees can be first with the news

IT IS not all that difficult to understand the resentment of employees when news of important company developments such as acquisitions or major disposals reaches them via the press.

Why, they ask, are they usually the last to find out about the things that affect them at their place of work?

In the case of public companies the answer is frequently entirely unrelated to any management deficiency—a fact that often escapes the employee—with the result that management is presented with a difficult internal communications problem.

Publicly-quoted companies are obliged to inform the Stock Exchange first of all major developments, especially if such news is "price sensitive." The communications problem arises because of the efficiency of the media—radio, television and even newspapers can have the information on the streets within minutes.

Up to now management has had few options to solve the problem, the most obvious being to pre-prepare an information package to be released on noticeboards at a designated time. But this is usually considered impractical because of the risk of premature leaks.

The other, most common, method is to utilise the telex machine, but this too can be unsatisfactory as it can sometimes take several hours to complete a series of transmissions.

Now, a major British communications company is trying to close the gap with the help of its own technology and a sophisticated computer equipment and software package.

Thorn EMI, whose internal communications problems are complicated by its size, diversity and decentralised nature, is planning to instal a private viewdata system, which allows page viewing of textual/graphical information through an ordinary television set. As from June, 50 UK plants employing 70,000 people will have the new facility. Thorn claims this is the first time such a system will be used for this purpose in the UK.

It will enable management to key through important announcements within seconds of any Stock Exchange release. The information will be picked up by operational chief executives or divisional personnel directors at the sites and distributed to the workforce through the usual channels (noticeboards, meetings etc).

The system, which is not accessible to any outside party, can also be used as a tool for passing management information, such as stock sheets and as an "electronic mailbox" for messages.

Apart from the capital cost of the mini-computer (priced at £17,000) and the television sets, the only other expense is the rental of each terminal from the Post Office, which works out at about £264 a year.

The system is being sold under the brand name of Incotel, which is being jointly marketed by Radio Rentals Contracts, a division of Thorn EMI, and Incoterm, a subsidiary of Honeywell UK.

Thorn EMI expects there will be around 35 announcements a year that need to be communicated in a hurry around the group. These would include the interim and preliminary figures, major appointments and important orders and contracts, although a policy decision is still being awaited on such "sensitive" items as closures and redundancies.

David Sowter, the group's public affairs adviser, says: "Communications is all about not having to react to situations. Crisis communications is the worst possible problem to handle.

"It has not always been possible to beat the media. In the past we've tried to do it with telex but radio makes it very difficult. With viewdata we'll be getting to the stage where we can at least equal the media."

Sowter emphasises that this is only a small part of Thorn EMI's employee communications programme, which is implemented through the company's corporate public affairs or personnel departments. Apart from the viewdata exercise, it displays telex announcements about other matters on notice boards, publishes a monthly newspaper called Headline for all employees, a monthly Management Digest, and an annual video report.

The company also runs twice-yearly senior management briefings by the chairman, and Employee Communications Committees at which non-union issues can be discussed.

Sowter believes that among the refinements which will change the face of industrial communications in the next decade will be a vast expansion in the use of video and viewdata. And he hopes that, "as Britain is now the fastest growing video market in the world, and the most advanced in terms of viewdata development, British companies may well be in the forefront in applying these techniques to internal communications."

Arnold Kransdorff

هكذا من الأصل

Building and Civil Engineering

Laing wins contracts worth £103m

THREE contracts with a combined total of more than £103m have been awarded to the John Laing Group.

In Iraq, Laing International has been awarded a £63m contract by the State Organisation for Roads and Bridges.

This includes the design and construction of seven major interchanges across the Army Canal in Baghdad, comprising 22 reinforced concrete overbridges—including one major 12-span reinforced concrete viaduct—and 12 underpasses, together with associated roadworks.

G. Maunsell and Partners have been retained by Laing as design consultants.

At the Queen Alia International Airport, under construction near Amman in Jordan, Laing Projects BV in a joint venture with General Enterprises Company (GENECO) of Amman, has been awarded a contract by the Jordanian Minister of Transport for the completion of important works.

These are valued at more than £30m and include the terminal buildings, the Royal Pavilion, runway and taxiways. Completion is expected by the middle of next year.

Laing Projects has provided a management service to GENECO at Queen Alia Airport since September 1978. The designed capacity of the airport is 2.6m passengers a year by 1985 building up to 6m annually by the year 2000.

Designers for the project are Tippetts-Abbett-McCarthy-Stratton (TAMS) of Washington, and the consulting engineers for the Government are Dar Al-Handasah, Shair and Partners of Beirut, in joint venture with Sir Frederick Snow International of London.

A £10.75m contract for the building of 17 km of two-lane dual carriageway motorways from Estarreja to Vila de Feira in northern Portugal—part of the Lisbon-Oporto motorway—has been awarded to Laing SA, Spanish member company of the John Laing Group, by the concessionary company, Brisa-Autostradas de Portugal.

The surfacing of the motorway, which will cross fairly level terrain, will be "black-top."

Included in the project are five underpasses and 14 overpasses, an interchange and toll area. Completion is due by mid-1983.

San Diego base for Wimpey operation

GEORGE WIMPEY's newest international company has now set up its headquarters organisation in San Diego, California, under the title of George Wimpey Incorporated.

Mr. R. B. Ferris, a Wimpey main board director, has taken up residence in California as president of George Wimpey Inc.

The company has already established regional offices in Houston, Texas; Worthington, Ohio; Miami, Florida; and Escondido, California, as well as the San Diego corporate office.

In addition to his Wimpey main board responsibilities, Mr. Ferris is a director of George Wimpey International. He has had considerable experience overseas, including Africa and the Middle East.

Before the formation of George Wimpey, Inc. contracts in the U.S. were controlled by Wimpey Canada from its headquarters in Toronto.

George Wimpey of Florida, the Miami subsidiary, has won a contract in Redevelopment Phase 1 at Miami International Airport from Dade County Aviation Department.

This contract for the reconstruction of roads, sewers, water and electrical work is valued at $6.8m (about £3m) starting this month and due to be completed in one year.

The company has also been awarded the N305 section of the Miami Dade Rapid Transit System. This includes the construction of concrete support members for the elevated railway. The contract is valued at $9.15m and is due to start next month for completion in November next year.

George Wimpey of California has been awarded the Lake Perris bypass contract. This calls for the installation of 2½ miles of prestressed concrete pipe on a site near Lake Perris in Riverside County, California. Valued at $7.3m, the work is due to start this month and to be completed next January.

This, and sundry civil engineering work which has also been awarded by public authorities in southern California, will result in a substantial increase in business this year, says Wimpey.

Wimpey International has won a contract valued at £2.25m from the Arab Potash Company for housing near to the site of the potash extraction complex in Jordan. It covers the construction of permanent houses, a hospital, guest house and a mosque at the potash residential area.

The contract begins this month and is due for completion in a year. The consulting engineers are Gibb Petermuller and Partners, Athens.

Wimpey International began work in February 1979 on facilities for solar evaporation pans, comprising earth-filled dykes, brine pumping system, power installation and distribution systems, roads and work camps on one of Jordan's largest contract. This was valued at £65m.

New health laboratory

TWO MEMBERS of the Powell Duffryn Group, John Mowlem and Andrews-Weatherfoil, are involved in a joint venture to build a new Public Health Laboratory at Colindale in north-west London.

The contract is worth £14.4m and the work is expected to take 3½ years.

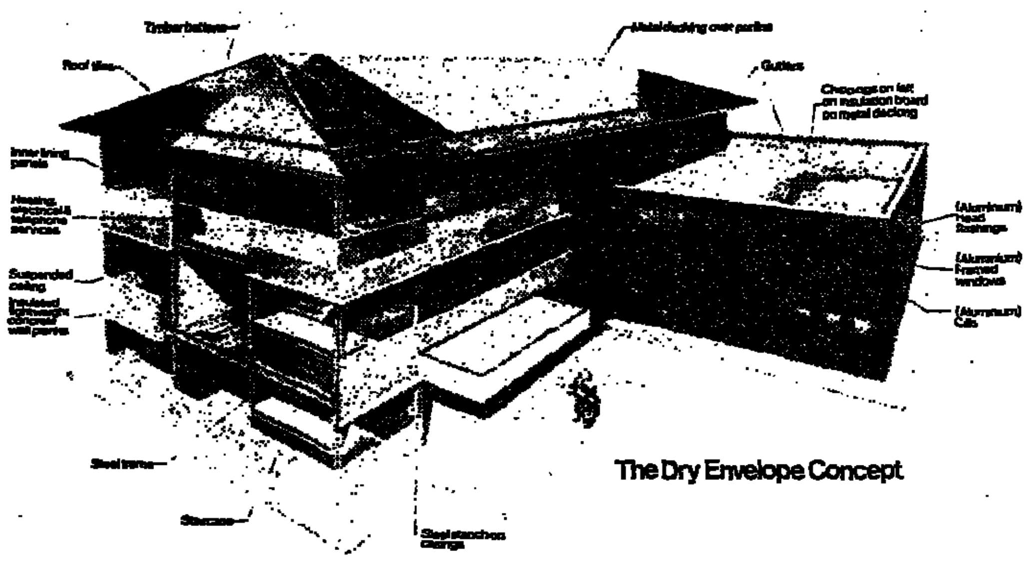
The project calls for a five-storey main laboratory block and boiler house complex. The main building will have a gross area of 215,200 sq ft and include a number of laboratories equipped for research in medical microbiology.

Reinforced concrete will be used for the frame and walls.

The specially formed joint company, Mowlem-Andrews-Weatherfoil, is undertaking both the building (£8.4m) and services installation (£6m) for the Public Health Laboratory Service Board.

Robert Matthew Johnson Marshall and Partners are the designers for the project and other consultants are Zisman Bowyer and Partners (service engineers) and Edmund Shipway and Partners (quantity surveyors).

Conder beats the weather with a new system



BRITAIN'S often unpredictable weather conditions hardly favour the construction industry, but for Conder it is probably a mixed blessing when it comes to selling its Kingsworthy system of construction.

First aim of the Kingsworthy method is to gain protection from the weather and Conder achieves this by completing the shell of the building in the first stages of a project.

Walls and roof of the steel-framed building are completed so that work can continue regardless of adverse weather conditions, doorframes and staircase are installed. Once this has been done the rest of the jobs can follow.

The Kingsworthy system has been developed to comply with the metric co-ordinated dimensions given in British Standard 4330 (1968) on the basis of a 300 mm grid. Conder says that within the basic grid virtually any plan form and elevational treatment can be achieved.

Buildings may be L, T or U-shaped. They can have courtyards or staggered elevations and may be of different sizes, heights and levels.

Restricted sites present few problems because all the components, including the steelwork and wall planks can be hoisted over obstacles such as existing buildings. A rigid steel frame carries the vertical and horizontal loads without the intrusion of bracing.

Conder's boast is that its Kingsworthy system enables construction times to be reduced with a consequential beneficial effect on contract prices.

The basic idea occurred to Conder way back in the 60s, and following the launch of the system in 1968 it has been improved in many ways and many limitations overcome.

Mansard and pitched roof designs are now possible as are polygonal and other irregular plan forms. Buildings may be of any height and may include balconies and bay windows.

The Conder Group is made up of 14 companies and last week, as already reported in the Financial Times, two of them, Conder Buildings UK and Conder Group Services, received the Queen's Award for Technological Achievement in recognition of the Kingsworthy method.

Much of the technological development has taken place in the last year or so, an indication of the system's increasing acceptability is given by its increasing contribution to Conder's UK Buildings Division £89m turnover.

In the last financial year the Kingsworthy system accounted for about 45 per cent of this turnover. In spite of the recession in the building industry the group as a whole had a turnover of £112m last year compared with £93m in 1979.

As Mr. R. T. Cole, chairman, says in his annual report Conder has "weathered the recession amazingly well and maintained full-time working in all our companies." Conder never minds the weather, it seems.

ARTHUR BENNETT

NEWS IN BRIEF

Hotel deal

THE Garden House Hotel in Mill Lane, one of Cambridge's leading hotels, has awarded a £2.6m contract to Walter Lawrence and Son to build a 62-bedroom extension covering 4,826 sq metres on four storeys.

It will include an entrance foyer, dining room, lounge bar and a conference room, with a plant room on the fourth floor. Work on the site began at the end of last month and the contract period is 86 weeks.

The architects are the Fitzroy Robinson Partnership Cambridge, and quantity surveyors are BDB Surveying Services, Great Dunmow, Essex.

Cement plant

THE Oscar Faber Partnership has been appointed consulting engineers for civil engineering work associated with a proposed cement-making plant for Blue Circle Industries at Shipton-on-Cherwell, near Oxford.

The plant, costing about £80m, will be capable of processing about 750,000 tonnes of clinker a year. It is expected to be operational by 1984.

Architectural advisers to Faber will be the John S. Bonnington Partnership.

By-pass work

THE SOUTHWATER by-pass road on the A24 to the south of Horsham is to be built for West Sussex County Council by Mears Contractors, a member of the Edmund Nuttall Group, under a contract worth about £2.5m.

The by-pass, 4.2 km long, will be of flexible pavement construction. Passing to the east of Southwater, it will connect at its northern end with the southern roundabout of the Horsham bypass. At its southern end a new roundabout will provide a connection with the Worthing road at Pollards Hill.

The work will take about two years to complete and be carried out under the direction of Mr. K. D. Williams, West Sussex County Engineer and Surveyor.

£6m for Costain

A FOUR-STOREY office block is to be built in Hammersmith Road, London W6, under a £6m contract awarded to Costain Construction by County and District Properties in conjunction with the Midland Bank Pension Trust.

Due for completion late next year, the building will have a concrete frame with a brick facade and dark bronze-coloured anodised aluminium windows. It will be air-conditioned and provide 108,000 sq ft of floor space planned around a central courtyard. The lift installation, mechanical and electrical services, plumbing and external works and drainage are included in the contract.

The architects are Chapman Taylor Partners and the structural consultants Ove Arup and Partners.

Water plant

DESIGN and construction of an 18m gallons a day water treatment plant to serve the Fife Regional Council supply area is to be undertaken by Paterson Candy Holst, a Portals/Norwest Holst jointly-owned company.

The turnkey contract is worth £3¼m and the works will be built in Glenfarg between Kinross and Bridge of Earn.

Main buildings will be arranged in three blocks on the sloping 7½-acre site. The administration building will house the control room, laboratory, reception and office areas and the same roof will extend over the filters, chemical plant and washwater presses.

Covered walkways will give access to the block containing a workshop, fuel and parts stores, garages and standby generator.

Factory units

FOUR CONTRACTS totalling about £7.3m have been won by Robert Marriott, a member of the French Kier Group. The two largest, worth £2.7m and £2.4m, have been awarded by the Peterborough Development Corporation and are for building advance factory units at Orton 4A and Orton 4B industrial estate.

The other two contracts, worth £1.25m and £950,000, have been awarded by the Milton Keynes Development Corporation for advance factory units at Blakelands North Phase 3A and Wymbush Phase 3.

LOMBARD

Why W. Germany needs the UK

BY JONATHAN CARR IN BONN

CHANCELLOR Helmut Schmidt is now on his way to what West Germans often irritatingly describe as their "biggest, most stable and reliable source of oil"—Saudi Arabia.

It is really meant as no discourtesy to the Saudi people to challenge part of that definition. Indeed, it would be pleasant (though it is hard) to believe that Saudi Arabia would be treated with the respect its history and the quality of its leadership deserves even if it had no oil to sell, and no money to buy weapons.

Nor can there be any quarrel with the factual observation that the Saudis supply more crude oil to the Federal Republic than anyone else—25m tonnes last year or more than one quarter of German imports.

Common interest

But is this really the "most stable and reliable" source? Is it more so than Britain, a partner of the Federal Republic within the European Community and the Atlantic Alliance, whose forces in West Germany and West Berlin are the clearest possible sign of an elementary and overwhelming common interest, whose accumulated direct investment in Germany totals DM 6.8bn and last year alone turned out to be far bigger than that of any *other single country*?

If Britain's oil supplies were negligible then this point would hardly be worth making—but they are not. In 1979, Britain was the Federal Republic's fourth major source of oil, last year it was the third—supplying 15 per cent of imports—and in the first quarter of this year it displaced Libya to move into second place. Of course North Sea oil is not cheap (as those buying German industrial exports know only *too well, if you want quality* you have to pay for it). But does anyone seriously believe that supplies from Britain are less stable or reliable than those from elsewhere? And is this not a fact of crucial political and strategic importance to West Germany (*though* not only to her)—all the more so after the *overthrow of the Shah of* Iran?

Face Germans with all this and they are quite willing to admit the truth of it "but of course, when we refer to stability and reliability in this context we are leaving Britain aside and referring simply to OPEC."

That is, unfortunately, a highly revealing statement about West German-British relations, not simply with respect to oil.

Successive London Governments have managed over the years or so to play their cards with the Germans as to derive the minimum credit for British achievements and the maximum blame for British mistakes (there have, after all, been one or two). British diplomats complain that the "French get away with murder" in Bonn—and there is something in that. For example, to hear the Germans talk, it would be easy to feel that Britain was solely responsible for the European Community deadlock on fish, and France simply another injured victim of "perfidious Albion."

Pervasive

What is the cause of this? One could offer all sorts of historical and economic explan*ations—but the main reason is* very simple. No British Prime Minister has managed to establish the same close relationship of personal trust with Chancellor Helmut Schmidt which exist between the chanceller and President Valery Giscard d'Estaing.

The influence of that relationship is pervasive at all lower levels of Government, so that Franco-German problems are played down and areas of agreement played up. This may seem to be a kind of optical illusion—but given time the approach induces a habit of mind.

Britain and Germany badly *need to establish something of* the same order. The next talks between Herr Schmidt and Mrs. Thatcher at Chequers on May 11 would be a good time to start—the day after the second round of the French elections which Herr Schmidt so fervently hopes will keep "cher Valery" in power.

Extradition complexities hinder the war on crime

THE WEEK IN THE COURTS

BY JUSTINIAN

EXTRADITION OF fugitive criminals evokes a range of responses. To the ordinary *member of the public the fugitive* is often depicted as a romantic and daring figure. Efforts by the authorities to secure his surrender by another country to face his trial, or serve out his sentence for crimes of which he has been duly convicted, arouse the same sort of sympathy extended to the fox in the hunt.

To the law enforcement agency the problem of escaping criminals presents a major problem affecting the suppression of domestic, not to mention international crime. International co-operation in the rendition of fugitive criminals is fraught with complexities. The law of extradition provides the lawyer with a rich harvest of technical issues and an array of nice questions and moot points.

So it has been with Mr. Ronald Biggs in his tense battle with the legal authorities in Barbados. A wave of emotion for his cause, some of it distinctly misplaced, was finally rewarded with the technical hiccup which led the Supreme Court of that West Indian Island to release the man who has been Scotland Yard's quarry since he clambered over the wall at Wandsworth Prison 15 years ago for the ultimate sanctuary of Brazil.

If the Biggs affair exposed a minor weakness in the international edifice constructed to catch fugitive criminals, it did at least in the result sidetrack a growing problem in the capture of criminals abroad.

Extradition has developed many defects since the heady days of the end of the last century when states began readily to make suitable arrangements for the return of the few criminals seeking refuge in their territories. The three most serious hurdles to overcome now are: (1) a lack of sufficient extradition treaties between states, so that there are places to which the ever-increasing number of criminals can escape, literally with impunity.

(2) The inflexibility of many existing treaties, so that for a wide range of crimes there are no grounds for surrender.

(3) The elaborate procedural requirements which must be met before a surrender can take place.

Until recent times there was little difficulty on the first and second score, so far as countries of the Commonwealth were concerned But by the 1960s, with a growing number of former colonial territories achieving independence, a new system of extradition within the Commonwealth was clearly called for. At a Commonwealth Law Officers' conference in 1966 a new scheme was agreed on. Following this agreement it was intended that each Commonwealth country would repeal existing laws (which in the case of the United Kingdom was the Fugitive Offenders Act 1881) and would introduce replicated legislation.

The Fugitive Offenders Act 1967 in the United Kingdom has *been copied in many countries* of the Commonwealth, which avoids the difficulties in treaty interpretation and of disparate legal systems. What often produces a stumbling block between foreign sovereign states with widely differing legal systems was happily circumvented by a uniform procedure in countries mostly following the Anglo-Saxon system of law. But some countries—Barbados *among them until too late in* the day—have not legislated in accordance with the 1966 scheme.

The Biggs affair should lead the backsliders to speedily rectify the omission of their legislatures.

A new impetus might also have been given to the number of extradition treaties between foreign (non-Commonwealth) States which could usefully be increased. The international community cannot go on countenancing the situation where serious offenders are able to snap their fingers at authorities which properly seek their arrest and due incarceration. International agreements to combat terrorism will be undermined if the escaping terrorists can seek refuge *in a non-extradit*able country. Some positive international co-operation is urgently needed.

The Biggs affair threw up another ticklish problem which is likely to recur in the years ahead. The main ground for sympathy for the individual hunted by the authorities to serve out his 30 year sentence for his part in the Great Train Robbery was the way in which *he came to be amenable to ex*tradition. Kidnapping a person, so that he loses his immunity in one country and becomes exposed in another, raises an age-old problem in modern guise.

So far, the rule of international law has been clear enough. If a person is arrested abroad and brought before a court in another country charged with an offence which that court has jurisdiction to hear (and even more so if he is brought back to serve a sentence of imprisonment from which he escaped) it is no answer for him to say: "I was arrested contrary to the laws of State A or the State of B where I was actually arrested." He is in custody before the court which has jurisdiction to try him. That is enough to justify his trial. That hopeless line of argument availed Adolf Eichmann not at all when agents of the Israeli Government abducted him from Argentina in 1961 and brought him back to Israel.

So long as the authorities of the state which seeks the return of the fugitive criminal do not soil their hands by engaging in kidnapping, or even hire private individuals to do what they cannot do themselves, the rule of international law will properly prevail. But if extradition becomes increasingly unavailable, for one technical reason after another, the temptation for states to take the law into their own hands will develop.

And even if the authorities *assiduously avoid getting* involved, there will always be voices raised to claim that in some indirect way the kidnappers have been doing the bidding of their own governmental agenies. If the courts are faced by a deliberate *decision of one of the executive* arms of government to promote in a direct or indirect way the very illegality which has led to a person being returned to the country wanting the criminal, there will be a tendency by courts to deny to the authorities *the right to the processes of* criminal justice. And that will be as harmful to the supression of crime as the illegal act of kidnapping, whoever carries it out.

Quite apart from the judicial attitude to fugitive offenders brought to trial through an illegal act in bringing them before the court, there is the problem of the courts to whom applications for extradition will be made. Suposing the Supreme Court of Barbados had not resolved the Biggs case on the technical hitch in the country's legislative process, would the fact that the arrival of the fugitive on Barbadian soil had been effected illegally have prevented the courts from neverthe*less ordering his extradition* to Britain?

The intriguing question has probably one clear answer. The fact of kidnapping would not have halted the order for extradition. But would the public in this country have been entirely happy to see a man sentenced to to 30 years' imprisonment for a daring crime, of which he had served only two years before his escape, having to complete that sentence, with the prospect that he could not even be considered for parole for another eight years?

The public empathy shown to Mr. Biggs would have proved an awkwardness for a prison administration in the UK already under great strain. We *should perhaps be thankful that* such ticklish public issues have been avoided by the application of the rule of law in Barbados.

Fact and the form book at odds

RACING

BY DOMINIC WIGAN

MANY might have expected a comparatively quiet build-up to the Classics with the Guineas Trials behind us and three and five days respectively to go until differences of opinion will be settled.

In the past few days, however, a number of searching gallops have led to reassertions of faith in several animals beaten this *season and a waning of confid*ence in at least two who have come out and won.

For the many who feel it is prudent to rely on the facts in the form book, the variance in odds over the 2,000 gns chances of Kind of Hush and To-Agari-*Mou can make no sense.*

Twelve days ago Kind of Hush beat To-Agari-Mou on merit by three-quarters of a length at level weights in the Ladbrokes Craven Stakes. They meet on identical terms over the same course later this week, but To-Agori-Mou is 4-1 in the 2,000 gns betting, while Kind of Hush is four times those odds.

The principal factors behind this are that Kind of Hush is considered inferior to his fellow *South Bank challenger Mota*vato, and that To-Agori-Mou (who continues to impress at home) was heavily backed for the 2,000 gns before his recent defeat.

It would appear reasonable to assume that those who supported To-Agori-Mou before that listless display will not want to risk further support. Equally few are likely to be out to back a trial winner rated well behind his stable companion Motovato.

Steve Cauthen was quick to *announce that Motovato rather* than Kind of Hush would be his 2,000 gns mount. That decision was followed by the news that Motovato continues to create the more favourable impression at home.

One or two backers noted for their interest in the ante-post markets are more anxious than ever to support Motovato rather than Kind of Hush and this will be reflected in the gns market over the next few days. It is possible Motovato will go to post disputing market positions with To-Agori-Mou.

Latest 2,000 gns odds read: 4-1 To-Agori-Mou; 8-1 Motovato; 10-1 Another Realm; 12-1 Church Parade; 16-1 Bel Bolide, Kind of Hush, Beldale Flutter and Prince Echo.

BRIGHTON

1.45—Basil Boy***
2.15—Sunset Ray
2.45—Ganimede**
3.15—Drill
3.45—Satin Grange
4.15—Musical Minx*

TV/Radio

† Indicates programme in black and white

BBC 1

6.40-7.55 am Open University (ultra high frequency only) 12.42 pm Regional News for England (except London). 12.45 News. 1.00 Pebble Mill at One. 1.45-2.00 Heads and Tails. 3.15 Songs of Praise from Preston, Lancashire. 3.53 Regional News for England (except London). 3.55 Play School (as BBC2 11.00 am). 4.20 Cheggers Plays Pop. 4.40 The All-New Popeye Show. 5.00 John Craven's Newsround. 5.05 Blue Peter. 5.35 The Amazing Adventures of Morph.

5.40 News.
5.55 Nationwide (London and South East only).
6.20 Nationwide.
6.55 Ask the Family.
7.20 Star Trek.
8.10 Panorama.
9.00 News.
9.25 The Monday Film: "For a Few Dollars More," starring Clint Eastwood.
11.30 Education Shop.
11.55-12.00 am News Headlines.

All Regions as BBC 1 except as follows:

Cymru/Wales — 1.45-2.00 pm *Pila Pala. 5.55-6.20 Wales Today.* 6.55-7.20 Heddiw. 11.55 News Headlines, News and Weather for Wales.

Scotland—12.40-12.45 pm The Scottish News. 5.55-6.20 Reporting Scotland. 11.55 News Headlines, News and Weather for Scotland.

Northern Ireland—3.53-3.55 pm Northern Ireland News. 5.55-6.20 Scene Around Six. 11.55 News Headlines, News and Weather for Northern Ireland.

England—5.55-6.20 pm Look East (Norwich); Look North (Leeds); Look North (Newcastle); Look North West Manchester); Midlands Today (Birmingham); Points West (Bristol); South Today (Southampton); Spotlight South West (Plymouth).

BBC 2

6.40-7.55 am Open University.
11.00 Play School
4.50-6.55 pm Open University
6.55 *Mid-Evening News.*
7.05 Plants in Action.
7.30 Wide World of Entertainment: "The Mazowsze."
8.15 The Two Ronnies.
9.00 The Nolans in concert.
9.35 "The Crime of Captain Colthurst."
10.35 The Light of Experience.
10.50 Newsnight.

LONDON

9.30 am Who's Afraid of Opera? 9.55 Drink or Die. 10.20 "The Love Boat II," starring Hope Lange and Robert Reed. 12.00 *We'll Tell You a Story.* 12.10 pm Rainbow. 12.30 Home and Design. 1.00 News, plus FT Index. 1.20 Thames News. 1.30 Crown Court. 2.00 The Riordans. †2.30 Monday Matinee: "To Be Or Not To Be," starring Carole Lombard and Jack Benny. 4.15 Five Magic Minutes. 4.20 Graham's Ark. 4.45 Spectrum. 5.15 Money-Go-Round.

5.45 News.
6.00 Thames News.
6.35 Crossroads.
7.00 Nature Watch.
7.30 Coronation Street.
8.00 Chintz.
8.30 *World in Action.*
9.00 The Sweeney.
10.00 News.
10.30 "The Anderson Tapes." starring Sean Connery and Dyan Cannon.
12.20 am Close: "Sit Up and Listen," with Sir Frederick Catherwood.

All IBA Regions as London except at the following times:

ANGLIA

9.30 am Call it Macaroni 9.55 Rocket Robin Hood. 10.20 Friends of My Friends. 10.45 Entertainment Special—Black Beauty. 11.30 Laurel and Hardy. 11.50 The Bubblies. 1.20 pm Anglia News. 2.00 Money-Go-Round. 2.30 Monday Film Matinee: "Sands of the Desert," starring Charlie Drake. 5.15 pm University Challenge. 6.00 About Anglia. 6.30 Welcome Back Kotter. 10.30 Sweet and Sour, the Story of Sugar. 11.00 Superstar Profile. 11.30 Rockstage. 12.30 am Reflection.

ATV

9.30 am Call it Macaroni. 9.55 Patterns. 10.20 Feature Film: "In This House of Brede," starring Diana Rigg. 1.20 pm ATV News. 2.00 The Monday Matinee: "Rockets Galore," starring Donald Sinden. 3.45 Money-Go-Round. 5.15 Mr. and Mrs. 6.00 ATV Today. 10.30 Left, Right and Centre. 11.10 ATV News. 11.15 Rockstage. 12.15 am Something Different.

BORDER

9.30 am Bailey's Bird. 9.55 Jabberjaw. 10.20 Anna and the King. 10.45 Chopper Squad. 11.35 Mork and Mindy. 1.20 pm Border News. 2.30 Monday Matinee "The Blue Knight. 3.45 Money-Go-Round. 5.15 Diff'rent Strokes. 6.00 Lookaround Monday. 6.15 The Collectors. 6.30 Mr. and Mrs. 10.30 Pro-Celebrity Snooker. 11.15 Rockstage. 12.15 am Border News Summary.

CHANNEL

1.20 pm Channel Lunchtime News, What's On Where and Weather. 2.00 The Monday Matinee: "Woman of the Year" 3.45 Money-Go-Round. 5.15 *Mr. and Mrs.* 6.00 Channel Report. 6.20 Cartoon Time. 6.30 Mork and *Mindy. 10.28 Channel Late News.* 10.36 Twenty Years. 11.20 Rockstage. 12.15 am News and Weather in French.

GRAMPIAN

10.05 am First Thing. 10.10 Larry the Lamb in Toytown. 10.20 Stars On Ice. 10.40 The Lost Islands. 11.10 240 Robert. 11.55 Hales and Batchelor Cartoon. 1.20 pm North News. 2.00 Monday Matinee: "Kenner," starring Jim. Brown. 3.45 Money-Go-Round. 5.15 Mr. and Mrs. 6.00 North Tonight. 6.30 Country Focus. 10.30 Lou Grant. 11.30 Rock Stage. 12.30 am North Headlines.

GRANADA

9.30 am The World We Live In. 9.50 *Spiderman. 10.15 Tarzan. 11.00* Sesame Street. 1.20 pm Granada Reports. 2.00 Money-Go-Round. 2.30 Monday Matinee: George C. Scott in "Fear on Trial." 5.15 Mr. and Mrs. 6.00 Granada Reports. 10.30 The Monday Film: Michael Caine in "Alfie."

HTV

9.45 am The World We Live In. 10.10 The Ploughing Match. 10.40 Fangface. 11.00 Sesame Street. 1.20 pm HTV News. 2.00 Money-Go-Round. 2.30 The Monday Matinee: "The Love Boat." 5.15 Mr. and Mrs. 6.00 Report West. 10.28 HTV News. 10.30 Quincy. 11.30 Rockstage.

HTV Cymru/Wales—As HTV West except: 12.00-12.10 pm Ffalabalam. 2.00-2.30 Hamdden. 4.15-4.20 A Hair *Raising Tale. 4.45-5.15 Ser.* 6.00 Y Dydd. 6.25-7.00 Report Wales. 8.30-9.00 Yr Wythnos. 10.30 World in Action. 11.00-11.30 Punchlines.

SCOTTISH

9.55 am Lumberjack Games. 10.20 Spread Your Wings. 10.45 Stars on Ice. 11.10 Wild, Wild World of Animals. 11.30 The Land that Came in from the Cold. 1.20 pm News Headlines and Road and Weather Report. 2.00 Monday Matinee: "Dangerous when Wet," starring Esther Williams and Fernando Lamas. 3.45 Money-Go-Round. 5.15 Emmerdale Farm. 6.00 Scotland Today. 6.40 Crimedesk. 10.30 The Amazing Years of Cinema. 11.00 Afloat. 11.30 Rockstage. 12.30 Late Call.

SOUTHERN

9.30 am No Fence for Baronne. 9.55 *George Hamilton IV. 10.20 Animated* Classics. 11.20 Wild, Wild World of Animals. 11.45 Cartoon Time. 1.20 pm Southern News. 2.00 Houseparty. 2.25 "The Hour of 13," starring Peter Lawford. 3.45 Money-Go-Round. 5.15 Welcome Back Kotter. 6.00 Day by Day, including Southsport. 10.35 The Butlin's Southern Darts Classic. 11.05 WKRP in Cincinnati. 11.30 Rockstage.

TYNE TEES

9.20 am The Good Word. 9.25 North East News. 9.30 Survival. 9.55 George Hamilton IV. 10.20 Hanna Barbera Classics. 11.10 Wonder Wheels. 11.25 Hands. 11.50 *Larry the Lamb.* 1.20 pm North East News and Lookaround. 2.00 Money-Go-Round. †2.30 Monday Matinee: "The Man from the Diners' Club," starring Danny Kaye and Telly Savalas. 5.15 Mork and Mindy. 6.00 North East News. 6.02 Mr. and Mrs. 6.30 Northern Life. 10.30 North East News. 10.32 Northern Report. 11.00 SV/AT. 12.00 Hadrian's Wall—And You.

ULSTER

10.30 am Feature Film: "The Last of the Mohicans." 1.20 pm Lunchtime. †2.30 *Monday Matinee: "Two Mugs from Brooklyn,"* starring Laurel and Hardy. 3.45 Money-Go-Round. 4.13 Ulster News. 5.15 Mr. and Mrs. 6.00 Good Evening Ulster. 10.29 Ulster Weather. 10.30 The Irish Factor: "Taking the Pledge." 11.00 Soap. 11.30 Bedtime.

WESTWARD

9.20 am Horses in Harmony. 9.50 The Lost Islands. 10.15 Cities (Jonathan Miller's London). 11.05 *Spiderman.* 11.30 Father Dear Father. 1.20 pm Westward News Headlines. 2.00 The Monday Matinee: "Woman of the Year." 3.42 Gus Honeybun's Birthdays. 3.45 Money-Go-Round. 5.15 Mr. and Mrs. 6.00 Westward Diary. 10.32 Westward Late News. †10.36 Twenty Years. *11.20 Rock Stage.* 12.15 am Faith For Life. 12.20 West Country Weather and Shipping Forecast.

YORKSHIRE

9.30 am Sally and Jake. 9.55 Tarzan. †11.30 Laurel and Hardy in "Double Whoopee." 11.55 The Undersea Adventures of Captain Nemo. 1.20 pm Calendar News. 2.00 Money-Go-Round. 2.30 Monday Matinee: "How to Commit Marriage," starring Bob Hope and Jane Wyman. 5.15 Mr. and Mrs. 6.00 Calendar (Emley Moor and Belmont editions). 6.35 Happy Days. 10.30 All Hull Let Loose (documentary on last year's Rugby League Challenge Cup final). 11.00 Rockstage.

RADIO 1

(S) Stereophonic broadcast
‡ Medium waves

5.00 am As Radio 2. 7.00 Mike Reed. 9.00 Simon Bates. 11.00 Andy Peebles. 12.00 Stair Wars. 12.30 pm Newsbeat. 12.45 Paul Burnett. 2.30 Dave Lee Travis. 4.30 Peter Powell. 7.00 Stayin' Alive with Andy Peebles. 8.00 Richard Skinner. 10.00-12.00. John Peel (S).

RADIO 2

5.00 am Ray Moore (S). 7.30 Terry Wogan (S). 10.00 Susannah Simons (S). 12.00 David Hamilton (S). 2.00 Ed Stewart's Request Show (S). 4.00 Much More Music with David Symonds (S). 6.00 John Dunn (S). 8.00 Folk On 2 (S). 9.00 Humphrey Lyttelton with the Best of Jazz on records (S). 9.55 Sports Desk. 10.00 The Monday Movie Quiz. 10.30 Star Sound. 11.00 Brian Matthew with Round Midnight, including 12.00 News. 2.00-5.00 am You and the Night and the Music (S).

RADIO 3

6.55 am Weather. 7.00 News. 7.05 Morning Concert (S). 8.00 News. 8.05 Morning Concert (continued). 9.00 News. 9.05 This Week's Composer: Schumann (S). 10.05 Scottish Chamber Music (S). 11.40 BBC Scottish Symphony Orchestra (S). 1.00 pm News. 1.05 BBC Lunchtime Concert (S). 2.00 Matinee Musicale (S). 3.00 Pianists in Profile (Benno Moiseiwitsch). 4.00 New Records (S). 4.55 News. 5.00 Mainly for Pleasure (S). 7.00 Frank Wibaut Plays Chopin (S). 7.50 The Singer and the Voice *(talk by Alfred Alexander) (S).* 8.10 Music In Our Time (S). 9.35 "Bagatelle," operetta in one act by Offenbach (S). 10.30 Jazz in Britain (S). 11.00 News. 11.05-11.15 Cimbalom Music by Petrovics (S).

VHF Only—Open University: 5.55-6.55 am and 11.15-11.55 pm and for students in Scotland, Wales and Northern Ireland only: 11.55 pm-12.55 am.

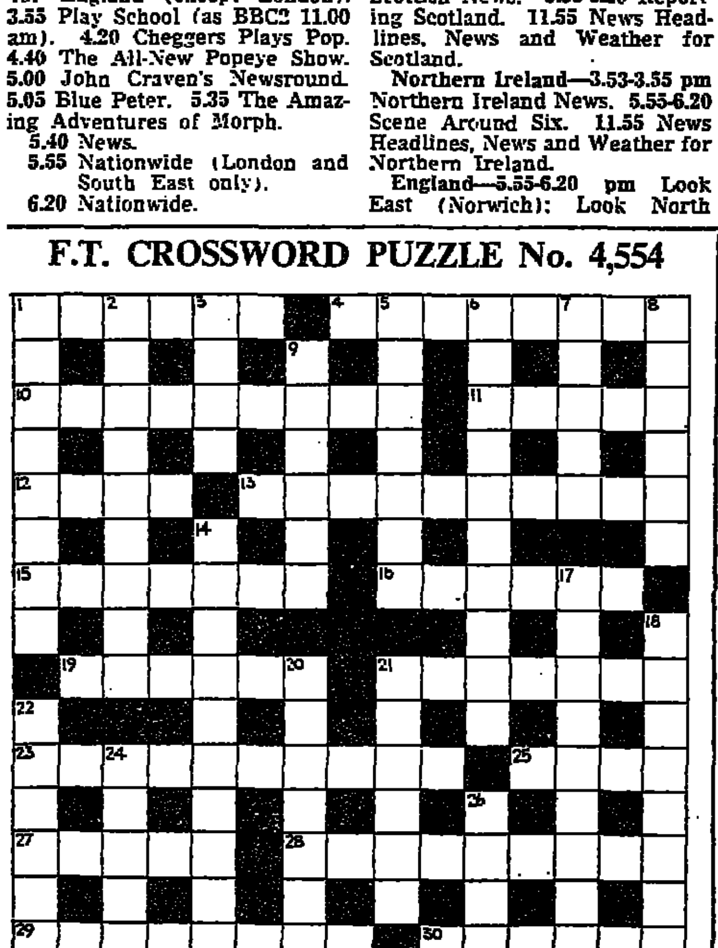
RADIO 4

6.00 am News Briefing. 6.10 Farming Week. 6.25 Shipping Forecast. 6.30 Today, including 6.45 Prayer for the Day. 7.00, 8.00 Today's News, 7.30, 8.30 News Headlines, 7.45 Thought for the Day. 8.35 The Week On 4. 8.45 Miles Kington *with treasures from the* BBC Sound Archives. 9.00 News. 9.05 Start the Week with Richard Baker. 10.00 News. 10.02 Money Box. 10.30 Daily Service. 10.45 Morning Story. 11.00 News. 11.05 Songs for the Times (S). 11.50 Poetry Please! (S). 12.00 News. 12.02 pm You and Yours. 12.27 The Small, Intricate Life of Gerald C. Potter. 12.55 Weather, Programme News. 1.00 The World at One. 1.40 The Archers. 1.55 Shipping Forecast. 2.00 News. 2.02 Woman's Hour. 3.00 News. 3.02 Afternoon Theatre: "The Chrysalids," by John Wyndham (S). 4.35 A Breath of Fresh Air. 4.45 Story Time. 5.00 PM: News Magazine. *5.50 Shipping Forecast.* 5.55 Weather, Programme News. 6.00 News, including Financial Report. 6.30 A Murder of Quality by John Le Carré. 7.00 News. 7.05 The Archers. 7.20 Just a Minute (S). 7.50 The Monday Play: "The Seagull," by Anton Chekhov (S). 9.50 Kaleidoscope. 9.59 Weather. 10.00 The World Tonight. 10.30 Science Now. 11.00 A Book at Bedtime. 11.15 *The Financial World Tonight.* 11.30 Today in Parliament. 12.00 News.

London Broadcasting

5.00 am As Radio 2. 6.30 Rush Hour. 9.03 *Morning Star.* 10.03 The Robbie Vincent Telephone Programme. 12.30 pm London News Desk. 12.40 The Tony Fish Total Music Show. 2.30 *Tony Blackburn.* 5.00 News. 5.15 The Good Vote Guide. 5.30 Music on the Move. 6.33 Inside London: Election Special—Paddington—All Aboard for County Hall! 7.03 Black Londoners. 8.00 As Radio 1. 10.00 Question Time from the House of Commons. 11.00-5.00 am Join Radio 2.

F.T. CROSSWORD PUZZLE No. 4,554



ACROSS

1 Season a type of lamb (6)
4 Successful combatant is to chew a particle (8)
10 One who praises an enlarger (9)
11 Engineers exert force and respond to a stimulus (5)
12 Cupel to examine critically (4)
13 Former teacher—or a genius (10)
15 Doctor joining mass-meeting *to all intents and purposes* (7)
16 Man making move on board (6)
19 I get up before the break of day, showing colours like the rainbow (6)
21 Wrench that could cause confusion in the works (7)
23 Type of transport for an excellent breed (5, 5)
25 Measure for walkers (4)
27 Hail North African oats (5)
28 To bat defensively could produce a boundary (9)
29 *Tied up there to dry outside* (8)
30 One who kisses a bird (6)

DOWN

1 Late although having considerable rate of speed (8)
2 Recorder employed in a hospital (9)
3 A fastener always to hand (4)
5 Nonconformist with present nervous disorder (7)
6 The length of life human beings face (6, 4)
7 Mixed paint that may be unsuitable (5)
8 One who certifies ton-up on a railway (6)
9 *Illuminated any prayer* (6)
14 A narrow escape from the barber? (5, 5)
17 Weapon given to sailor and N.C.O. (5-4)
18 One who talks too much about soft snake (8)
20 Endures session incorporating imprisonment (7)
21 Odds I obtained from stopper (6)
22 Horrified at gash thus produced (6)
24 Duck feast having a smell (5)
26 Nothing more than a pool (4)

The solution to last Saturday's prize puzzle will be published with names of winners next Saturday.

ENTERTAINMENT GUIDE

OPERA & BALLET

[illegible]

THEATRES

[illegible]

CINEMAS

[illegible]

CLUBS

[illegible]

ART GALLERIES

[illegible]

THE ARTS

ICA Theatre

1-2-3

by MICHAEL COVENEY

Three characters in three plays lasting a total of four hours was the rather thin reward for a seven-hour stint in the ICA on Saturday. Although an audience of two dozen scarcely lifted the occasion to a festive level, at least I can say I enjoyed the intervals. We were constantly reminded by Chris Parr's dark, tentative production, that this Tom McGrath trilogy is part of the *Radio Theatre '81 shindig*. If anyone on stage has anything loud or peculiar to say, the sound track immediately springs to life. The feel of the performance is more ingrowing than outgoing. More toenail than carnival.

You detect a reluctance to come to grips with Mr. McGrath's plays. You are right. They amount to the diary of a nobody who is not so much anonymous as unidentified. Mr. McGrath has scanned his own underground 60s history before in the theatre. That play, *The Innocent*, was a sprawling mess. This, it may sound ungrateful to report, is tautly written but with all the juice squeezed out.

The first piece, *Who Are You Anyway?* finds the cast in uniform grey costume, always a bad sign. From puberty to marriage, the clichés fly around the stage as two Scottish lads discuss their attitude to women, each other, sex, etc. The girl leaves one for the other. It is like watching a Celtic re-run of David Halliwell in his bad old multi-viewpoint days.

Colour invades the stage in *Very Important Business*, but it is the old-fashioned hue of Expressionism as a man who *was* happy worries about unemployment, is temporarily splashed in the paint of "the Paracelsus alchemy show," sinks with his house and family to the bottom of the ocean, joins the Army and ends up dead in Northern Ireland as either an IRA traitor or a British Army captain. Thin Ron Bain is now established as the central character, while large Gregor Fisher operates admirably as his alter ego, friend, tempter and wetter half. This play, though brittle, is completely confused. It ends with a theatrically misjudged distended mealtime joke about going on hunger strike.

Nothing for it, then, but for Ron Bain to retreat in the third play, *Moondog*, to the Scottish Alps. Surrounded by a dying fire, a biscuit box, bits of Tupperware, and a tiny Buddha, he prays for transcendent wisdom. Gregor Fisher clambers into view, offering newspapers, whisky, and a job down below. Mr. Bain has left all this behind, turning vegetarian and slightly silly. The trio is re-formed by the arrival of Shelley Lee, an Illinois tourist who has climbed the wrong mountain but has not forgotten her Moon ritual gear. In a somewhat po-faced climax, the company wash their feet, do exercises, and succumb to Miss Lee's threatening exhortations. Ron Bain settles for basking in his own radiation.

There is something dated and very "fringe" about the whole event. It lacks the adventurousness and *élan* of Ken Campbell's *The Warp* (not to mention that piece's size). As a trilogy, it never amounts to an epic experience; as drama, the third play is the best merely because Mr. McGrath exhibits less strain and extracts some earthy humour from the lads' different views of subcultural larking about. At last the two old friends take on a vestige of character. But not for long, and rather too late.

Elizabeth Hall

Music Projects

by ANDREW CLEMENTS

The niche that Richard Bernas and Music Projects/London have carved out for themselves becomes increasingly invaluable. They present contemporary instrumental music on a larger scale than the burgeoning collection of contemporary music groups, and generally of a more uncompromising and cosmopolitan outlook than the work of the London Sinfonietta. Friday's programme was typical: Boulez's *Domaines* in the full version for clarinet and instrumental groups, Xenakis' *Anaktoria* and the first British performance of Rolf Gehlhaar's *Particles*.

In London at present *Domaines* seems to be in vogue. Friday's was the third performance of the current season, though only the solo clarinet version had previously been played. Music Projects have also programmed it before, in a concert at Riverside Studios, but the decision to repeat the account on the South Bank was sensible. The full instrumental score makes the best possible case for what is one of Boulez's most suspect works, and Roger Heaton plays the solo clarinet part superbly. With correctly co-ordinated instrumental responses there is more incident and colour in the piece than any number of hearings of the dry and cerebral solo work could suggest, and even the mobile form and the insistence on peripatetic soloist come to seem less arch.

The major stumbling block to a sympathetic assimilation of Gehlhaar's new work was the composer's own programme note: "The order of the 47 audible interactions between the particles of this composition is determined by the limits of the parameter values: a particle may only undergo those transformations that do not force its parameter values beyond the limits of possibility." But taken on its aural merits *Particles* was a lively and sometimes quite elegant essay in exploring and developing a heterogeneous instrumental group that included amplified voice and synthesiser.

At times it seemed as though the vocalist (Lynda Richardson) was intended to have a leading part, for the electronic balance always gave her prominence. As a result some of the less interesting vocal writing (Stockhausen's *Stimmung* has effectively ruled out of court a whole range of effects) distracted attention from the rest of the group. The impression too often was of specific and precise vocal writing and more generalised background support. A forceful and assured performance from the Music Projects players, and an equally impressive account also of Xenakis' surprisingly grateful exploitation of the edges of instrumental capabilities.

Degas portrait acquired by National Gallery

The National Gallery has acquired an outstanding work by the Impressionist painter Edgar Degas: the portrait of *Hélène Rouart in her father's study*. This painting (oil on canvas, 161 x 120 cms) has gone on show to the public in Room 44.

Recently exhibited at the 1979-80 *Post Impressionism* exhibition at the Royal Academy, the painting has been purchased by private treaty from an anonymous private collector in England.

Hole Cottage, Cowden near Edenbridge in Kent

The Pineapple at Dunmore in Stirlingshire

Architecture

Preservation for pleasure

by COLIN AMERY

When it comes to preserving buildings there is one man who is a true hero. His name is John Smith and he is the founder, with his wife Christian, of the Landmark and Manifold Charitable Trusts. From next Wednesday until June 13 there is an exhibition at the Heinz Gallery, 21, Portman Square, London, W1, which shows some of the buildings that have been rescued by the Landmark Trust and explains the philosophy behind this very remarkable, very English organisation.

John Smith has turned his attention to the fundamental question which lies behind the preservation of buildings—what are they to be used for? He decided that the best thing for the kind of buildings that most often disappear—the small, remotely situated and often peculiarly individual buildings—was for people to spend their holidays in them. This was a brilliant bit of lateral thinking; by providing a use which also earned an income from the buildings some of the costs of future maintenance could be met and more buildings could gradually be acquired. When people stay in these buildings they learn in the most natural way much more about the pleasures of architecture, the countryside and the history of these islands than they would on a motorway jaunt to a stately home.

Because the Landmark Trust has given preservation a purpose and even the possibility of a plough-backable profit, it has been able to undertake the rescue of buildings that no one else could consider taking on. The exhibition shows only a selection of the 70 or so properties owned by the Trust, but they demonstrate quite clearly the range of possibilities.

There is Alton Station near Stoke on Trent in Staffordshire. This little Italianate railway station was built by the North Staffordshire Railway Company for the Earl of Shrewsbury, then owner of Alton Towers—Pugin's strange and wonderful castle. The abandoned railway line and derelict canal are set in beautiful surroundings and guests who have stayed for their holidays in the station describe "the nice E. Nesbit atmosphere."

Also in Staffordshire is Tixall Gatehouse which was built in 1580 for Sir Walter Aston. It is an extremely handsome and ambitious building with four polygonal turrets on the corners and windows framed by pairs of columns, representatives of all three Orders. When found by the Landmark Trust it was a ruin without roof, floors or windows. Now it has rooms for visitors and a paved roof which overlooks the glorious landscape.

During the repair of their buildings the Trust has often made important archeological discoveries. At Warden Abbey near Biggleswade in Bedfordshire—a fragment of a Cistercian Abbey—a well preserved 14th century tile pavement was uncovered.

Perhaps the best known of the Trust's properties and certainly one of the most popular, is the Pineapple at Dunmore in Stirlingshire. This eccentric edifice is a summer house that was built in the shape of a giant prickly pineapple by the Earl of Dunmore in 1761. On each side of the huge fruit are stone bothies that were built for the gardeners and now make comfortable sleeping and living rooms.

Equally exceptional in quality is the Music Room in Lancaster—a small garden pavilion that has long ago lost its green surroundings and until the Landmark Trust came along was squashed by warehouses and workshops. Inside this little classical building is one of the most remarkable Baroque interiors filled with lavish plasterwork which took over 6,000 hours to restore. There are the muses of history, music, poetry, dancing and comedy and the Trust has wisely left the room empty—the plaster speaks for itself and fills the space with richness.

You can stay in the heart of Bath in a Landmark building, the fine early 18th century house built (possibly by Lord Burlington?) for Marshall Wade, that stands right by the West front of Bath Abbey.

If your taste is more for vernacular buildings you could try Hole Cottage near Edenbridge in Kent. This is a tink surviving wing of a late medieval timber framed hall house standing by a stream in a wood. It has an almost tangible atmosphere—as one of the visitors wrote in the log book "we didn't go anywhere as it is so nice here."

Not all the Landmark properties are small, they look after Lundy Island which offers several agreeable places to stay, and is the most expensive of all the Trust's undertakings.

Because Landmark is supported by the generous and large scale philanthropy of the Manifold Trust it has often been in a position to spend large sums of money on buildings. Wrotham Manor in Devon, a medieval house of the most remarkable quality has cost £200,000 to restore, and the Lancaster Music Room nearly £100,000.

In Derbyshire the Trust has shown that preservation even at these high prices can be financially successful, by purchasing Edale Mill and selling the leases of six flats the £70,000 conversion costs were recouped.

Although much money has been spent by the Trust it would be wrong to give the impression that they are keen on restoring buildings to look like new. The buildings are put into good order and then furnished in a way that suits them—usually with good old furniture, worn but beautiful rugs and pictures and books that add something to the story of the building or the locality.

John Smith and his wife and staff have always had very high standards. Their aim has been to open the eyes of the people who stay in the buildings so that preservation becomes unnecessary. Every night all over the country people are now able to go to bed in surroundings that will add richness and understanding to their lives.

This exhibition shows for the first time how successful the Landmark Trust has been. It has rescued a most intriguing set of buildings. It has never advertised and yet 15,000 people each year enjoy staying in these places. Like the National Trust, Landmark is one of those peculiarly English organisations that has shown the world that only by caring about our history and our surroundings can we make sense of the present.

The Landmark Trust is at Shottesbrooke, Maidenhead, Berkshire—their buildings are available all the year round and they tend to be fully booked some time in advance. Charges can be had from the secretary who would welcome a stamped addressed envelope.

Festival Hall

Philharmonia

by DAVID MURRAY

The Philharmonia concert on Saturday became a memorial to Kirill Kondrashin, who should have conducted it. His place was taken by André Previn, who led the orchestra behind Vladimir Ashkenazy in both the piano concertos of Brahms. For obvious reasons it is unusual to find these taxing works in a single concert; but Ashkenazy met the challenge superbly, seconded by Previn with unflagging concentration. It made a commemoration that was memorable in its own right.

Separated by about a quarter-century, the concertos have distinct characters which these performances set in high relief. There is youthful Romantic seriousness in the D minor Concerto, athletic and sternly impassioned; Previn swept the orchestra into the opening Maestoso, and Ashkenazy carried that restless drive through the movement with big piano-tone—grand clangorous octave trills—but no indulgent broadening for the second subject. Something of the air of concerned inquiry lasted through the Adagio, which was no detached idyll; in the Rondo the purposeful thrust of Ashkenazy's playing was enhanced by giving full weight to Brahms' "non troppo" qualification for this Allegro. Previn did not seek to gloss the unappetising orchestration of the work (his strings had strident passages), but insisted on the cogency of the musical argument.

The broad opening of the B-flat Concerto is often made "Emperor"-like; Ashkenazy was ruminative instead, following the horn-call with private reflections. Where the Concerto is forceful, none of its mature power was abated, but the pianist found more introspective space in his music than is often recognised, a dimension beyond the gladiatorial struggles. Perhaps the Finale sounded more loosely strung than it really is, but at least all its parts were made to speak—and to sing; for all the imposing strength of this reading, it was lyrical first and foremost, and the more satisfying for that.

Coliseum

Ariadne on Naxos

by RONALD CRICHTON

The *Ariadne* of Strauss in the new English National Opera production (reviewed by Arthur Jacobs after the recent premiere at Nottingham) is now to be seen at the Coliseum. On Saturday Linda Esther Gray took the title role which, owing to illness, she did not sing at the London first night. There were a few wraiths of mist on the voice but it was none the less a grand performance to hear and to watch—Miss Gray catches the essential goodness behind the absurdities and the tantrums. She looks splendid. Few more heart-warming accounts of the starry-eyed "Es gibt eim Reich" solo can have been heard since the famous old record by Maria Cebotari came out after the war.

Ariadne had stalward support from the Bacchus of Kenneth Woollam, singing the unenviable role with unflagging musicality (but his off-stage cries before his entrance are too distant). The conductor, James Lockhart, treated the orchestral part of the final duet with unusual care, making it, logically if not tactfully, the effective climax of the opera. Perhaps for this reason the rest lacked flavour—not enough salt in the Prologue nor enough jam in the Opera proper. It is not a good sign when the idiosyncratic orchestration of *Ariadne*, as sometimes happened at this performance, sounds tea-shoppy, with too much piano.

The Composer of Sally Burgess was excellent—vocally she can command this house almost as easily as Miss Gray. The only thing lacking was the ability to "flute" fast high notes in the coy Viennese way, an over-rated accomplishment on the whole but useful in this part. Marilyn Hill Smith's *Zerbinetta* is commendable, but she is only beginning to fill out a role to which there is more than oeillades and roulades. A gentle, touching Music-master from Neil Howlett. Melodious nymphs from Diane Mansfield, Shelagh Squires and Elizabeth Brice.

That the four clowns in Zerbinetta's train were ineffective was partly the fault of the designers, Douglas Heap and Deirdre Clancey. The clowns' costumes were killed by the ugly white double staircase which persists through both parts of the entertainment. Would the richest man in all Vienna have been so stingy with his winter-garden? For the reticence of the prouucer Jeremy James Taylor, and for his generally sensitive groupings and movement, one was grateful. But the now customary updating to the early years of this century only adds to the pudding of anachronism. What could be heard of the new translation by Tom Hammond was so good that the cast should be doubly determined to get every word across, and not only in the Prologue.

Wigmore Hall

Zabaleta

by PAUL DRIVER

The Spanish harpist Nicanor Zabaleta, now in his 70s, gave one of his infrequent recitals in the Wigmore Hall on Saturday. As much as any senior musician billed as legendary, Zabaleta deserves the claim having, we were informed, played some 3,000 concerts in his long career, discovered much forgotten repertoire and commissioned many new works. It helps, too, to have an endorsement from Maurice Ravel on your programme sheet.

Solo harp recitals themselves inevitably have a glow of legend: the instrument's first sounds arouse such childish glee that it isn't until the second or third item that one hears beyond the novelty to the music. And, one is never wholly accustomed to this specialised music making, at once impossibly exotic and absolutely archetypal — the medium of angels, mythical bards and even Nature herself.

On the evidence of Zabaleta's programme, mortal composers have not generally felt able to apply themselves seriously to the medium. The most rewarding of his more-or-less cronological sequence of little pieces was paradoxically the only one which had not been conceived for harp-Corelli's Sonata Op. 5 no. 7 whose translation must be accounted magical. Viotti's harp sonata in B-flat on the other hand was a completely undistinguished parody of Mozartian keyboard style. A jump of a century and a half between it and the immediately following Partita in C (1950) of S. Bacarisse was surprisingly unnoticeable, which only emphasises how implacably itself the instrument always remains.

Zabaleta whose elegance and refinement of play is never finicky and does not rule out a certain brashness or occasional cutting of corners, interrupted the Partita to tell us he was dissatisfied with his handling of its scurrying Pasapié and thereupon repeated it. There was something inconclusive, also, in his performance of Tailleferre's Sonata (1953)—though the mediocrity of its invention deserved no better. It was in a forceful account of Fauré's poetical *Une Chatelaine en sa Tour* Op. 110 and in M. Samuel-Rousseau's engaging *Variations Pastorales* that Zabaleta used his subtlety of tonal and dynamic control to best "white-feathering" effect.

Martin Luther King Memorial Prize 1980

It has been announced that *The Sailor's Return*, a Euston Films' production, and Maurice Nyagumbo's autobiography *With The People* share the Martin Luther King Memorial Prize for 1980.

The annual award is given to literary works published or performed in Britain, which are seen to reflect Dr. King's ideals.

With The People is the autobiography of the Zimbabwean Nationalist organiser and leader, Maurice Nyagumbo, who spent most of the last 20 years in prison in Zimbabwe/Rhodesia. *The Sailor's Return*, transmitted by Thames Television in December, 1980, starred Tom Bell and Shope Shodinde as an English sea captain and his wife, the daughter of an African King, who he brought home to settle in his native Dorset in 1858.

Further sponsorship for Glyndebourne

Three additional sponsorships for this year's festival at Glyndebourne have been announced. Two new sponsors have come forward to give Glyndebourne financial help while a third is continuing its support.

Meridien International Credit Corporation, in its first arts sponsorship in this country, is providing financial support for the revival of *Le nozze di* Mr. Helmut Rothenberg is making a substantial contribution to Glyndebourne to help meet the cost of, and to maintain, the standards of musical preparation which determine the quality of ensemble work so long a hallmark of Glyndebourne's performances.

The Peter Stuyvesant Foundation, which has supported Glyndebourne regularly since 1966, is giving financial assist- for the revival of *Ariadne auf Naxos*.

TENNIS BY JOHN BARRETT

Rich conclusion to world series

THE 20-year-old French No. 1, Yannick Noah, and Brian Gottfried, the American from Fort Lauderdale, who is nine years older, will enter the 17,500 seat Reunion Arena in Dallas tonight for the first match of the $200,000 World Championship Tennis final, worth $100,000 to the winner.

This rich conclusion to the eight-tournament world series of tennis circuit, which began in Monterrey, Mexico, in January, and ended two weeks ago in Houston, is the eleventh WCT play-off.

This ambitious series has given us some memorable tennis and some worthy champions from Ken Rosewall in 1971 and 1972, through Stan Smith (1973), John Newcombe (1974), Arthur Ashe (1975), Bjorn Borg (1976), Jimmy Conners (1977), Vitas Gerulaitas (1978), John McEnroe (1979), to Connors again last year.

It is all the more disappointing, therefore, that Connors is unable to defend his title owing to a severe case of gastroenteritus, which struck him last week at his home in Miami, after he returned from the unfinished Monte Carlo final against Guillermo Vilas. Miami doctors, Paul Rozyens and Lewis Elias, pronounced Connors unfit for play this week. Tournament director, Rod Humphries explained: "The doctors say Jimmy is a very sick boy. He has asked for medication to get him fit for Dallas, but with a temperature of 103 and a severe case of dehydration, there is now way he could be fit in time. He faced the prospect of three 5-set matches and they felt it would be dangerous for him to embark upon such vigorous physical activity so soon."

The withdrawal at such a late stage has thrown the tournament organisation into confusion, as the posters, programmes and TV adverts have all had to be changed at the last moment. The draw also had to be remade, with Sandy Mayer coming in as the replacement for Connors, ahead of Gerulaitis. Both had 130 points but Mayer had a more impressive record against the seeded players in the qualifying tournaments.

The new draw, with the seeding positions in brackets, is John McEnroe (1) U.S. v Sandy Mayer, U.S. (18); Brian Gottfried, U.S. (5) v Yannick Noah, France (14); Wojtek Fibak, Poland (3) v Johan Kriek, S.A. (6); and Vijay Amritraj, India (7) v Roscoe Tanner, U.S. (2).

It is ironic that this year's altered rule, which instead of relying on accumulated points offered automatic places at Dallas to the winners of each tournament, have failed to attract a full strength field. Borg could not win either tournament he contested. The young German, Rolf Gerhing, surprised him in the second round in Brussels, and McEnroe beat him in the Milan final.

Although Vilas won the Houston tournament, he declined his place, as he was already committed to a sustained spell of clay courts with the imminent defence of his Italian title uppermost in his mind. Both America's Gene Mayer (Sandy's brother), who stands at number 4 in the world and the number 6, Ivan Lendl of Czechoslovakia, sustained injuries on the circuit, while Gerulaitis failed to clinch the deciding tie break against Kriek in the opening tournament in Monterey, and then he, too, was injured in Brussels.

It is all rather a sad story, bearing in mind WCT's immense contribution to the growth of professional tennis. Behind the recent WCT announcement that htey are withdrawing from the Grand Prix lies a realisation that they have lost their identity. Already, rich exhibition matches and special events are threatening to destroy the fabric of the Grand Prix circuit. As part of that circuit, WCT are restricted by the rule against paying guarantees and by the difficulty of persuading certain managers to support the WCT tournament with leading players who they control.

Their future plans will be announced later this week, and I expect to hear that WCT will mount at least 8 new tournaments each with prize money of $500,000 and a field of 16 players, who will be signed to individual agreements.

If this happens, we shall be back where we started, when open tennis arrived in 1968. It was partly to combat the threat of losing leading amateurs to the newly-formed WCT circuit that Open tennis came about. Later, the creation of the Grand Prix had the same objective in view. There seems no likelihood that the Men's International Professional Tennis Council will allocate clear weeks for WCT tournaments, so a head-on conflict would be inevitable.

FOOTBALL by TREVOR BAILEY

First Division proves its strength

THE EVENTS of last week more than upheld the claim of those who believe the English First Division to be the strongest, as well as the most demanding league in Europe, probably in the world.

Liverpool, who have suffered more than their share of injuries, have won the league cup, could win the European cup again, and should finish in the top six of the table, but are still said by some to have had a disappointing season.

On Wednesday night, the well-disciplined Mersey machine, despite the early loss of the unique Dalglish, managed a one-all draw with Bayern Munich in the Olympic stadium to reach the European final against Real Madrid.

On the same evening Ipswich, who until their recent disappointments were on course for the always improbable treble, picked themselves up off the floor to defeat Cologne away. They are now in the final of the EUFA Cup, against Alkmar, whom they should beat. This would provide some compensation for having been for most of this long season, the best side in the land.

Although Bobby Robson's team could still carry off the league championship, this is now unlikely, as they would not only have to win their last two matches, but Aston Villa would also have to fail to obtain a point at Highbury on Saturday.

Their slump has stemmed from too many games and too many injuries to key players. However, unlike two great Leeds teams of the past, they still may finish with a tangible reward for their efforts.

On Saturday Aston Villa, who last won the League championship in 1910, demonstrated why they are now so close to rectifying the matter. In difficult conditions, a slippery pitch, a high wind and freezing rain, they completely outclassed a mundane Middlesbrough with a sparkling display. Their 3—0 victory in no way did justice to their all-round superiority, and but for the agility of the visiting 'keeper, and an unsympathetic cross-bar and post, they would have scored half a dozen.

On this performance they showed themselves worthy of the title, and should do well in Europe next season, because they are a well-balanced side without noticeable weaknesses. They possess enormous enthusiasm, play attractive football, and has sufficient youth to suggest they are capable of further improvement.

The Villa back four is not only sound and well-organised, but both their fullbacks are able, and keen, to launch dangerous counter-attacks, while their centre back, Evans, was on hand to secure the final goal.

The forceful Mortimer provides the drive and the openings in mid-field, with the slight, very skilful Cowans, who has the asset of being able to change the tempo, on his left, and the more positive Bremner on his right.

Up front, the thrustful Withe and the youthful Shaw form an effective and contrasting double-spearhead. The much-travelled Withe is an old-fashioned, goal-conscious centre-forward, good in the air, with the strength and determination to withstand physical challenges.

He is also particularly adept at laying the ball off for a colleague, while Shaw is a fine prospect, combining ability to finish, with considerable style. Completing the attack is Morley, who effortlessly glides past defenders, as well as beating them by pace. He is an entertainer and a potential match-winner.

Throughout the Middlesbrough match, it was noticeable how much quicker Villa were both in the tackle and the interception. In addition, the standard of their ball control on a treacherous surface remained remarkably high. They also showed the value of the reverse pass—

As well as Ipswich, Liverpool and Aston Villa, the present First Division contains at least 8 more good club sides, but the strength of the league is perhaps best illustrated by the recent performances of teams fighting to avoid relegation, like Brighton, Leicester, Coventry and Norwich.

In the last few weeks, they have certainly underlined the fact that there are few easy matches in this competition, if one ignores Crystal Palace, ruined by internal discord, and an abundance of character. Unfortunately, these virtues do not assist the England manager, Ron Greenwood, who is now trying to assemble his squad for the World Cup from players who are mentally and physically tired from the demands of an overlong season.

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The Cambridge prescription

A DOCTOR who always prescribes the same medicine, irrespective of his patient's symptoms, is apt to be called a quack. Over the past 10 years, while inflation, unemployment and currency collapses have alternated as Britain's major economic problems, the Cambridge Economic Policy Group, headed by Mr. Wynne Godley, has doggedly insisted that there is only one cure for all these ills: general import controls. It is therefore perhaps not surprising that the CEPG has been accorded less respect by politicians than might have been expected, given its academic eminence and its comparatively good record of long-term forecasting.

There is, however, one important reason why laymen may at times mistake a good doctor for a charlatan. For the doctor may offer the same treatment for different ailments because he perceives something the layman misses—that all the varied symptoms stem from a single cause.

Persistence

The belief that Britain's fundamental economic malady is the same now as it has been for the past 20 years underlies the CEPG's continuing demands for import controls. These are repeated more vehemently than ever in the Review published today, at a time when Britain is already enjoying the biggest current account surplus in the industrialised world. The CEPG's diagnosis and the persistence of its policy recommendations provides an interesting comparison with the equally firm convictions held by Mrs. Thatcher's Government.

The CEPG's belief that the most important task of government policy now is to arrest the disastrous trends in the "supply side" of the economy is in many ways closer to Mrs. Thatcher's attitude than to that of the Labour Party or the trade unions. Many Ministers would echo the view that "governments throughout the 1970s, with their successive and even contradictory preoccupations with finance and inflation, failed to come to grips with the underlying phenomenon—British Industries falling behind in international competiion."

The CEPG argues that Mrs. Thatcher's policy is in fact the clearest and most damaging example to date of government obsession with financial aggregates to the detriment of the real economy. But she would claim that her motivation is very different from that of, say, Mr. Denis Healey (whom the CEPG accuses of having initiated many of the present Government's policies). For Mrs. Thatcher, the ultimate aim of policy is not to maintain a particular level of output and employment or even to secure a reduction in inflation, but to create conditions in which British industry will break out of its long-term trend of declining competitiveness. On this the CEPG is closer to Mrs. Thatcher than to many of her opponents, who seem more willing to accept industrial trends as given and to direct policy towards accommodating them.

Thus, while many conventional Keynesians now advocate reflation or devaluation in order to increase demand, output and employment, the CEPG argues that it is not the level of aggregate demand, but industry's response to demand, that is of over-riding importance. Boosting demand now would produce some increase in domestic output, but would mainly lead to higher imports and eventually a balance of payments crisis, a collapse of sterling and another inflationary explosion.

On the question of how British industry can be helped to regain its competitiveness the CEPG is, of course, diametrically opposed to the Government. It derides the idea that continuing intense competitive pressure, combined with expectations of price stability and low interest rates, can revive industry. On the contrary, the CEPG believes that industrial restructuring can only occur when output is growing rapidly. Reflation, but only in combination with import controls, is needed to give industry the required shot in the arm.

Fruitful

The next few years will show whether the Government's faith in businessman's ability to respond to market conditions once inflation is under control is justified. Even if the Government is not vindicated, it is questionable whether the CEPG's prescription of protecting inefficient industries against efficient competitors abroad will appear a plausible formula for industrial regeneration. However, in acknowledging clearly that fine tuning of demand deals with only the symptons, not the causes, of Britain's industrial weaknesses, the CEPG is helping to move economic debate in a more frutiful direction.

EEC: danger of a subsidy race

THE EUROPEAN Commission is putting renewed pressure behind its endeavours to ensure that national subsidies do not unduly distort competition within the Common Market. Especially at a time of high unemployment within the Community it is easy to shrug this off as a piece of Eurocrats' officiousness. Some national Governments may be tempted to do so, but nobody has yet discovered how you can run an integrated market, such as that for industrial products within the Community, unless you ensure fair play by some means or other.

Hence the Treaty of Rome contains a number of provisions to ensure fair competition and to keep control over national subsidies and incentives to industry. They include well defined exemptions: subsidies, for instance, are considered to be compatible with the Common Market where they are intended to help areas of abnormally low living standards or of abnormally high unemployment. (In the cases of coal and steel the position is slightly different, since they are governed by the Treaty of Paris which, among other differences, is less hostile to cartels than the EEC treaty. But there, too, the principle of fairness to all member states is essential.)

Safeguards

Nobody will pretend that the treaty safeguards are watertight. For instance, depreciation rates, with their importance to industrial investment differ greatly as between member countries. To try to harmonise them at this stage of European history is assuredly not practicable, and maybe not even desirable. But the existing rules represent what the founding fathers could agree on and should be enforced. That process has, of course, been going on for years.

Two events have given it new vigour: a decision of the European Court forbidding the Dutch Government to subsidise the expansion of a Philip Morris cigarette factory and the Commission's new-found interest in state-owned and state-controlled businesses. The background is the justified fear that the recession has encouraged member states to try to export unemployment to each other.

In ruling against Philip Morris, the court made the interesting point that to judge whether unemployment in a region is low enough to justify state aids being extended unemployment must be measured not against the prevailing national level, but against that in the Community as a whole. Having won the Philip Morris case, the Commission is now examining a number of similar cases, including a proposed ICI plant at Rotterdam, to see how they stand up in the light of the court's verdict.

In the case of state-owned industry, the Commission last year gave itself powers to scrutinise the figures to ensure that there was no illegitimate state aid. The British, French and Italian Governments claimed that the Commission had exceeded its powers by issuing a directive without the endorsement of the Council of Ministers. They went to the European Court, which has not yet ruled on the case.

A closer look at state-controlled industry could turn up all sorts of doubtful practices, not least in Italy. But it also drags in BL which has been kept above water for years with Government money.

Speaking of BL, a Commission official has taken the view that anything inconsistent with normal commercial risk funding is liable to be opposed. Therein lies the crux. Brussels cannot very well prevent a normal shareholder from investing his money in worthy but unprofitable ventures. But shareholders do not usually have bottomless purses: governments sometimes behave as though they did.

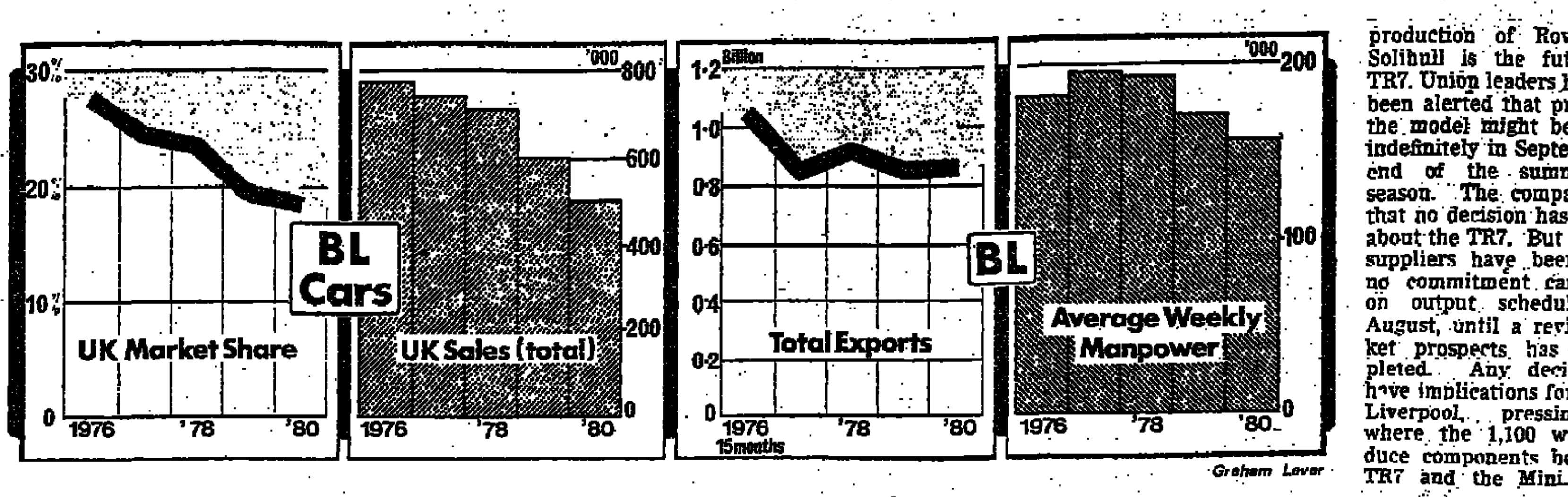
Achievement

The creation of a customs union is one of the main achievements of the European Community. But competition between member states continues to be distorted by subsidies and other forms of assistance. It is entirely right that the Commission should use its powers to monitor these practices and to put pressure on governments to play by the rules. No government has anything to gain from a subsidy race.

NEW MODEL STRATEGY

More hard choices for BL

By Arthur Smith, Midlands Correspondent



Graham Lever

"WHERE do we stop?" was the question posed by Sir Michael Edwardes, the BL chairman, when he spoke recently to backbench MPs about the contraction of the state-owned vehicles company. In three years the workforce has been slimmed from 200,000 to 141,000. £200m has been spent on redundancies and plant closures. Last year alone 26,000 jobs disappeared.

Sir Michael said "the budget has had a strong deflationary effect" and the company was now again having to evaluate the assumptions behind its 1981 corporate plan—a five-year strategy to which the Government is already committed with the promise of £990m aid.

BL did not intend asking the government for more money. But Sir Michael warned "in order to live within our cash constraints we shall have to take further painful action in such areas as manpower, fixed expenses and investment."

The company has so far remained silent on where the axe might fall but shop stewards fear that in addition to a continued labour shake-out in pursuit of higher productivity there could be further cuts in capacity. Output from the cars division has fallen by more than 20 per cent in each of the past two years from 611,624, in 1978 to 395,824 in 1980. Sir Michael told MPs that he could see no sign of an upturn this year and the impact of the budget on demand was likely to be even greater in 1982 and beyond.

Sales of the Metro, produced at the giant Longbridge plant, Birmingham, have so far exceeded expectations and lifted morale throughout the company. In the first quarter of this year the car has not only threatened to topple the Ford Cortina and Escort from the top of the best-seller league but also given a significant lift to BL car's UK market share beyond the psychologically important 20 per cent barrier (compared with the 18.94 per cent achieved in the comparable period last year).

But in the words of one leading BL dealer: "We are in danger of becoming a one model outlet. Metro so far has accounted for around 40 per cent of all BL sales. On its own it begins to rival sales of all other models put together from the Mini through to the Daimler." There is concern that the success of Metro has been less at the expense of Ford and foreign imports and more at the expense of the traditional Mini and the Allegro.

Output of these two models also produced at Longbridge, has already been scaled down. But much of the labour freed is likely to be required for the Metro as production is stepped up following the car's launch in Europe. The Birmingham plant with its 18,000 strong labour force and recent £240m capital investment appears relatively immune from any further cuts.

Cowley, Oxford, currently struggling with an ageing model range but chosen as the site for the LM10, the new medium sized car to be launched in less than two years, presents a key test for the company. Weekly output of the Maxi (600), Princess (400) and Ital (just over 1,000) is running at only around 30 per cent potential capacity. A decade ago the Marina the predecessor of the Ital alone was being turned out at the rate of 5,000 a week.

The Maxi is likely to be phased out within 12 months and the Princess, in spite of a facelift early in 1982, must have only a limited life. But it is the Ital that really exposes the weakness of BL in the important fleet market. The car, essentially a revamped Marina and BL's main challenger to the Cortina grabbed more than 4 per cent of the market last month (March) but that owed much to an aggressive sales campaign.

BL's main hope of plugging the gap before the arrival of the LM 10 rests with the Triumph Acclaim, assembled in collaboration with Honda of Japan, and now going into production at Cowley. But the Acclaim, with a 1300 cc engine and an annual output of only around 60,000 represents more of an up-market Triumph Dolomite replacement than a full-blooded challenger in the fleet market. Whether it will be enough to sustain market share in the key medium vehicle sector remains to be seen. Sir Michael has so far silenced critics who said Metro would arrive too late in a crowded smaller car market. He must pull off a similar feat with LM 10 which according to industry experts must achieve an annual output of around 250,000 to be viable.

The problems, if anything, could prove greater in the luxury car market represented by the Rover and Jaguar marques. The sector has been hit hard by the international recession, the rise in energy costs and the consequent trend towards smaller vehicles.

Jaguar, in particular, at the top of the range would appear vulnerable. But Sir Michael has personally backed the company pointing out that his board has recently approved a £100m development programme for new models and lightweight engines. The aim in the new Jaguar, code-named the XJ40 and scheduled for launch in 1984, is to cut the weight of the car significantly.

There are those who argue that it will be difficult for Jaguar which is thought to have lost around £20m last year to become profitable in its present form. "With an output of around 15,000 vehicles a year it is too big to be an Aston Martin but too small to be a BMW," according to one senior motor industry executive. The new investment is based on the assumption that Jaguar can climb back to its former sales levels of some 30,000 a year.

The Rover car assembly operation also badly needs more volume. The Solihull plant is described by Mr. Todd Sullivan, national official of the Transport and General Workers, as "a plant which company policy has made one of the biggest white elephants in the history of the motor industry." The £27m facility built only five years ago for the launch of the new Rover saloon, the SD1, has on average worked at only around half capacity. The car has done well in the UK but, partly because of sterling, failed to make the expected impact abroad.

> "In order to live within our cash constraints we shall have to take further painful action in such areas as manpower, fixed expenses and investment."
>
> Sir. Michael Edwardes

The labour force, cut by many hundreds over the past 12 months is already down to around 3,000. Only two of the three assembly tracks are in use, but for one shift only, making Rovers and the TR7 sports car. Weekly output, in a plant built to turn out more than 3,000 cars a week, is down to around 800.

Union officials are only too well aware that at such levels of output overheads are far too high and the Rover, though selling well in a difficult market, must be incurring losses. Some fear that final assembly of the Rover will be switched to Cowley to fill some of the spare capacity at the Oxford factory. Cowley already does pressings for the Rover body following the rundown of the factory at Castle Bromwich, Birmingham.

Any transfer of car operations would not affect Land-Rover and Range Rover also assembled at the Solihull site but in different buildings. But for BL to sell off or mothball the car assembly facility would be acutely embarrassing. The project was hailed in 1976 as one of the most technologically advanced in Europe, offering high production standards and working conditions.

The future of Solihull and the other assembly plants will be affected by the extent and timing of any further rationalisation of BL's model range. The LM10, a hatchback fleet car to be launched in 1983, is scheduled to be a bit larger than the current VW Golf. A booted version, the LM11, would follow, leading in 1985 to the up-market fastback LM12, which would be aimed at the executive car market and which could conceivably carry the Rover name.

Commitment to the LM12 would represent a judgment that concern with fuel economy will scale down executive car expectations. The engine range, unlike the present 2,300 cc to 3,500 cc, would stretch merely from 1,600 cc to 2,000 cc. The engines could be the "O" series, currently used in the Metro and Ital, and the "E" series used in the Maxi. Such engines might appear dated by the mid-1980s: foreign collaboration on a new engine might be profitable, with BMW the favourite for some sort of deal.

The possibility of using the limited LM12 as a replacement for the Rover would accord with the pre-occupation of the international motor industry, with common components and the consequent economies of scale. BL, like Ford, is looking for the minimum number of floor-pans (the basic chassis upon which different body shells can provide a range of models).

One approach to rationalisation over the next five years might be to span the market with three floor-pans: the Metro, the LM (10, 11 and 12), and the Jaguar (XJ40). That contrasts with the five basic floor-pans put forward in the Ryder rescue plan in 1975. Plans for a straight replacement of the present Rover, code-named the Bravo, are thought to have been shelved last year because of shortage of cash. The Bravo would have involved another floor-pan. An alternative is to split the present 2,300 cc to 3,500 cc Rover range, pushing some customers downwards to the LM12 and others upwards to the Jaguar XJ40.

Such a policy, however, would run the risk of opening up a wide gap in the executive car market which might make BL vulnerable. Accordingly, some executives, in the absence of the Bravo project, are pressing for the LM14 and LM15 models as an alternative to LM12. They would involve a slightly larger floor-pan with a consequent increase in tooling and production costs, but would allow the use of a V6 engine to offer a 2.5 litre version of the Rover. Those engines might have to be bought in from foreign competitors.

Final decisions on such issues still lie well in the future. As Sir Michael said, when he reported the record £535.5m loss for 1980, "Survival is still the name of the game for 1981 and 1982." The more immediate question is how long a life the present Rover will gain from the face-lift planned for early next year. In addition to a new look, the Rover range will be extended downmarket with the introduction of a 2 litre model fitted with the "O" series engine.

Linked with the continued production of Rover cars at Solihull is the future of the TR7. Union leaders have already been alerted that production of the model might be suspended indefinitely in September at the end of the summer selling season. The company stresses that no decision has been taken about the TR7. But components suppliers have been told that no commitment can be given on output schedules beyond August, until a review of market prospects has been completed. Any decision would have implications for the Speke, Liverpool, pressings plant, where the 1,100 workers produce components both for the TR7 and the Mini.

The present weakness in sports cars, the traditional base for BL's U.S. sales, must cause concern about the company's representation in a key international market. The number of dealers there has already dropped considerably from around 430 to 370. The investment apparently committed to the development of Jaguar would demand international sales at a volume which would have to involve the U.S.

Collaboration in new models and perhaps in distribution with foreign companies is an important part of BL's strategy. But BL must negotiate not only against the background of a depressed international automotive industry but also with the more immediate problems highlighted by Sir Michael in his report to MPs. He complained that, without a further large cut in minimum lending rate leading to a fall in the value of the pound, BL might withdraw from more export markets.

How drastic any action Sir Michael might consider to live within "cash constraints" remains to be seen. Equally relevant is whether the consequences would be acceptable to a Government concerned about unemployment. Even Sir Keith Joseph, when he announced to the Commons £990m of Government assistance for BL over the next two years, was not prepared to guarantee the company would not require or be given further state aid.

The Government's options were relatively few, he said. "We tried to find a middle way, but there was no middle way." The cost of refusing extra funds would have meant the loss of an estimated 150,000 jobs, both within and outside BL. "Whether we accepted or rejected, the taxpayer has been clobbered."

BL has gained a badly needed boost to morale from the Metro: it is selling well in the UK and there are high hopes of success on the Continent. But the underlying problem remains that of building a viable car business on a volume—say around 530,000 cars a year—which is small by world standards. The hope is that a combination of new models, international collaboration and continued improvements in efficiency will do the trick. But the task is a formidable one.

MEN AND MATTERS

When the vote comes in . . .

After two months of electoral browbeating from their Presidential candidates, the French people yesterday got the chance to tell their would-be leaders what they thought about it all.

Enthusiasm did not run particularly high, to judge from a voters' turn-out five per cent down on that seen seven years ago. Some localities registered outright revolt. The whole population of the village of Toncries boycotted the booths to protest against the closure of a local school. Officials in another commune refused to organise polling because of the Government's refusal to licence a local pharmacy.

But most of the French populace struggled through the cold and wet to do their Republican duty. One mayor without proper facilities turned his sitting room into a polling station. Another opened up shop at 7.30 in the morning so that the local rugby team could vote before leaving for an away match. One village with many railway workers managed a five o'clock start.

The candidates all voted — presumably for themselves, although none made that clear. Only Brice Lalonde, an ecologist who incessantly preaches the virtues of nature, voted in Paris. The first of the ten candidates to get to the booths was President Giscard d'Estaing himself, though not reputedly an early riser. Francois Mitterand, the socialist who has rarely been known to get to a meeting on time, was last. Marie-France Garaud, a fearsomely punctilious campaigner, forgot her voting card but was permitted to make her mark on the strength of her identity papers.

But the prize for the biggest gaffe of the day went to Michel Crepeau, a "Radical of the Left." His efforts to win over the German-speaking electors of Haut-Rhin by printing his electoral address in German foundered when the copies of his text were instead distributed 500 kilometers away in a chic and distinctly right-wing Paris suburb.

. . . it's party time

In Britain, meanwhile, though the Social Democratic Party may have turned up its nose at the coming local government elections, voters in many parts of the country will nonetheless not want for new political movements hungering after the democratic mandate.

In Surrey and Sussex, the "All Night Party" will be fielding a dozen candidates campaigning for badgers to be given key cabinet jobs, a cheap energy policy based on treadmills, and the extension of suffrage to pets and other domestic animals.

North Yorkshire voters can put their support behind a "Whig" candidate, while "People Against Bureaucracy" is contesting two seats in Gloucestershire. No less than 32 different party labels are sported in Greater London, including "Abolish the GLC," 'Save London Action Group," and "Enoch Powel is Right." Southall voters can choose between ten candidates spanning traditional political extremes, and including an independent who styles himself "Southall's Mister Clean." Greenwich holds out the prospect of "Fellowship and Anti-Pollution," while Norwod is exhorted to stand up for "Fair Rates and Anti-Corruption."

Closer to the mainstream, the Ecology Party reckons on 300 candidates with particular concentrations in London, Avon, and Devon. And despite the SDP's official hors de combat stance, 100 candidates round the country have incorporated some version of the social democratic tag into their proclaimed affiliation.

All this is not to forget, of course, the hardy perennial Bill Boakes, whose canditures on his "Public Safety Democratic Monarchist White Resident" ticket have become a sort of acid test of the elasticity of the British democratic system. Having contested eight by-elections during the last Parliament, threeseats simultaneously at the last general election, and two by-eletcions in the current Parliament, he is back on the hustings in Streatham.

Keeping up

Reginald Jones receives a touching tribute from his managerial peers on his retirement from General Electric, the American group whose chief executive he has been since 1972. To accompany its annual league table of the 500 largest United States industrial companies, published in its current issue, Fortune magazine asked chief executives of the 500 which of their number they rated most highly.

Jones not only topped the poll, but won over five times as many votes as runner-up John Swearingen of Standard Oil of Indiana. And when the 500 potentates were asked which company was, in their view, best-managed, GE again topped the list, ahead of IBM and Exxon.

GE comes tenth in the 500, with 1980 sales of $25bn. The top ten is re-shuffled but intact from last year, with Exxon at the top breaking the twelve-digit barrier on sales of $103bn. Mobil at number two swops last year's places with third-ranked General Motors. IBM ranks eighth, but its $3.6bn net income on $26bn sales puts it second in profits behind Exxon. But perhaps the most striking figure in the tabulation is that of stockholders' equity in Chrysler—minus $104m.

Gulf course

There is no doubt among those who accompanied of her of the enormous enjoyment derived by the Prime Minister from her trip to Saudi Arabia and the Gulf. Received almost as lavishly as Queen Elizabeth in 1979, Mrs. Thatcher was treated more like a head of state than a prime minister, and was invariably addressed as "Your Excellency."

The British party processed from palace to palace in Riyadh, Abu Dhabi, Oman and Qatar, buildings whose extravagance and taste were dazzling to austerity-dimmed British eyes.

The suites allotted the party were so extensive that one Prime Ministerial aide got quite lost trying to find his way out of his eight-room lodgings at the Sultan's Guest Palace in Muscat. And they were decked out not only with video recorders and banks of hi-fi equipment, but also with displays of toiletries which, according to Denis Thatcher, would not have disgraced a shop in the Faubourg St. Honore.

Undeveloped

Overhead in a photographic ship: "Someday my prints will come . . ."

Observer

FINANCIAL TIMES SURVEY

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Monday April 27 1981

Communications

Big technical advances during the past 10 years have made possible such innovations as video conferences, facsimile transmissions and "intelligent" telephone exchanges. As the cost of supplying and manning conventional office services continues to rise, the new communications systems will play an increasing part in business life.

Moving towards the next century

By Guy de Jonquieres

THE WORLD communications industry is in the throes of a vigorous expansion and upheaval, the consequences of which seem certain to have profound economic and social implications extending well into the next century.

The effects of the change are being felt already in business and the home. They are producing—or soon will produce—not only improvements in the quality of established services like the telephone but also many new types of ingenious and versatile facilities.

Innovations entering service include "intelligent" telephone exchanges which automatically perform functions like re-routing calls or setting up conversations between several subscribers at once; video-conferences, using closed-circuit television; viewdata, which links television-style terminals to a computer data-base: and electronic document transmission.

Many of these advances are likely to see their first practical applications in offices, where communications technology enables formerly self-contained devices like word-processors and small computer systems to be linked together in sophisticated information networks.

Some of the most advanced office systems being developed are designed around a computer-controlled circuit which will carry both voice and data signals at high speeds. Their designers expect the executive desk of the future to be a "workstation" equipped to handle telephone conversations, word-processing, facsimile transmissions, data-processing and even video.

Such visions have yet to be tested in practice, and it remains to be seen whether tomorrow's executive, or his secretary, will be prepared to use all the wizardry which modern technology is able to bestow on them. Human attitudes will clearly play an important, though as yet unpredictable, role in determining the pace at which such innovations are introduced.

In the home, the range of communications services is being rapidly expanded by the spread of transmission techniques like usable television and satellite direct broadcasting, which enables television signals from a single ground transmitter to be beamed to simple rooftop dish aerials.

Development is particularly advanced in the U.S. where roughly one-fifth of private houses are now wired for cable. Some cable television operators offer as many as 40 different channels, providing a stimulus for the creation of many new types of programme material. Both Britain and France hope the U.S. will provide a fertile market for their teletext systems, which enable pages of textual information to be transmitted on broadcast channels.

This wave of innovation has been made possible, in the first instance, by dramatic advances in technology over the past decade. The most important single development has been the growing convergence of computer and communications technology, due above all to the application of the tiny silicon chip.

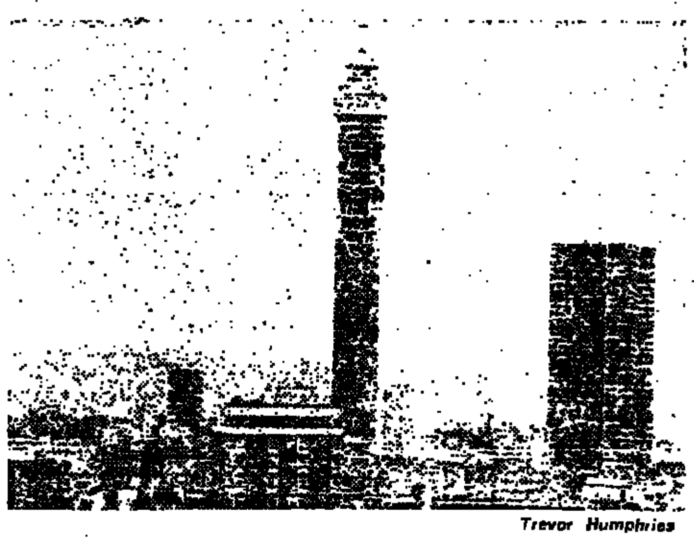
Electronic technology is being widely applied both to the switching and transmission of communications. Banks of microprocessors control the operations of the most advanced digital telephone exchanges, like Britain's System X, and also make the connections, replacing cumbersome electro-mechanical switching equipment.

System X is, in effect, a specialised piece of data-processing equipment. It is designed to handle both voice and data communications as a stream of digital information, a succession of zeroes and ones indistinguishable from computer language.

Further step

This same principle is also being applied to transmission. Traditionally telephone circuits have carried voice communications in the form of varying frequencies, corresponding directly to the sound waves generated by speech. But modern communications technology enables voice to be transmitted in digital form as a series of electronic pulses.

The technology is taken a step further with optical fibres. These hair-thin transparent strands carry digital data as intermittent flashes of light, generated by lasers or infra-red transmitters. Britain and other countries plan to replace their national communications networks with optical fibre circuits in the coming years.



Trevor Humphries

London's Post Office Tower—at the hub of Britain's telecommunications network

Digital communications systems offer a number of advantages. Transmission quality of voice and data is superior to that available on conventional analogue circuits. Digital exchanges are highly versatile, compact and reliable, requiring less maintenance than electro-mechanical switching equipment.

The convergence process is influencing not only design and operation of communications systems, but also the type of information and services they carry. Though voice communications still dominate—accounting for about 90 per cent of total traffic in most industrialised countries—transmission of data is expected to boom over the next few years.

Already, it is estimated that tens of thousands of micro-computer owners in the U.S. have plugged their machines into the telecommunications network. They use them for retrieving information from data-bases, transmitting messages electonically and exchanging computer programmes over the telephone line.

It is expected that by the end of this century, communications terminals will be as common a feature as telephones in private residences. The prospect opens up the possibility of a society in which banking, shopping, messages, perhaps even voting, can all be done electronically from home.

If technology has opened up new opportunities in communications, economics its providing the driving force for exploiting them. The huge economies of scale made possible by the mass production of integrated electronic circuits has pushed unit prices down to levels barely imaginable even a decade ago.

At the same time, costs of services such as travel, postal deliveries and printing, as well at staff overheads, have been rising sharply. As the two cost curves intersect, the economic logic of assigning to electronic communications tasks which were previously performed by the physical displacement of people or things, becomes increasingly powerful.

Many American companies are looking with considerable interest at the possibility of using video-conference services to provide communications between executives who at present travel thousands of miles a year to meet and discuss business.

Texas Instruments, whose worldwide operations are linked by a sophisticated satellite communications network, estimates it can transmit a message within seconds to any installation at an average cost of less than 5 cents. That is a mere fraction of the cost of sending the same message, far more slowly, by mail.

Many experts expect a strong increase in demand for innovative communications services within the next two or three years, initially among business users. Competition is already growing intense between American, European and Japanese companies, all keen to supply the market's requirements.

But the political, regulatory and economic environment in which the market will develop seems certain to vary widely between different countries. In the U.S., Federal policy has increasingly favoured freer competition in recent years. The telecommunications monopoly enjoyed by American Telephone and Telegraph has been trimmed, and the Federal Communications Commission recently decided to entirely deregulate data communications.

In Britain, where the Government has been much influenced by the American experience, moves are also under way to open the market to wider competition. British Telecom's monopoly over the supply of terminals and other subscriber apparatus is to be phased out over the next three years.

The Government is considering the still more radical step of loosening British Telecom's grip over its network. The Beesley Report, commissioned by Sir Keith Joseph, the Industry Secretary, recommends that private competitors should be allowed to operate commercial services freely on British Telecom's domestic and international circuits, and to set up independent networks.

But in other industrialised countries, Government policy remains more restrictive. Though several countries, including France, Italy and Japan, have liberalised terminal supplies to some extent, access to the network and the types of service offered on it remain firmly within the jurisdiction of national telecommunications administrations.

West Germany, traditionally a bastion of free market faith, subjects communications to exceptionally tight regulation. The Bundespost (Federal Post Office) exercises a far-reaching monopoly and fiercely resists attempted incursions by would-be competitors. Like some other European administrations, it is accused by its critics of giving a higher priority to increasing its revenues than to responding to its customers requirements.

Money is, of course, at the root of most issues in the politics of communications. For that reason, most European telecommunications authorities are likely to resist—for as long as possible—moves to tamper with their monopolies.

But the rapid growth of new and versatile communications services may confront them with a challenge in the longer term. It is still an open question whether technology will continue to be applied at a rate determined by the regulators, or whether it will succeed in side-stepping them and thereby stimulating increased competition.

CONTENTS

Post Office to relax monopolies

BRITAIN

JASON CRISP

MORE than one European country is watching Britain's attempt to liberalise its telecommunications network with somewhat sceptical interest. Outside the U.S., Britain is the first major industrial country to attempt to open up part of its telecommunications system to competition from private companies.

The scepticism about what Britain is attempting is two-fold. First, is Britain really going to allow foreign companies to compete or will it be, in practice, strongly protective? Second, if the market is truly liberalised will it not be very damaging to the indigenous telecommunications manufacturers and, to a lesser extent, British Telecom itself?

The British Telecommunications Bill, which is still going through Parliament, splits the Post Office into two businesses, posts and Giro on one hand, and telecommunications on the other. The monopolies currently enjoyed by both sides are to be reduced. In the case of the postal business it is a fairly modest reduction.

The proposed relaxation of the telecommunications monopoly is potentially radical, although whether it will be so in practice is far from clear. Considerable powers are vested in the Secretary of State for Industry and much will depend on how these powers are exercised.

The monopoly is to be relaxed in three broad areas. First, private companies will be able to compete with British Telecom to supply customers with telephone equipment, be it telephone sets, private exchanges or computer communications equipment.

Second, private companies may be able to offer "value added network service" (VANS). This means companies could lease private tied lines from British Telecom and offer services to other companies using those lines. An example might be an electronic mail service in which a document is transmitted to different parts of the country over the telephone line in seconds.

The third possible relaxation of the monopoly which will be made possible under the legislation will allow licensed private companies to compete with the network itself. A consortium of Barclays Bank, BP and Cable and Wireless is looking at the feasibility of a competing network linking companies in the City and other major towns through microwave, optical fibre and lasers.

The relaxation of the equipment monopoly is to be gradual, to allow British companies to develop suitable products which will compete with foreign companies. Telephone handsets, answering machines and modems, which enable computers to communicate on telephone lines, are likely to be the first to be opened up to competition.

At present the only legal way someone can have a telephone installed is to rent one from the Post Office (although there may be as many as 250,000 unauthorised telephones bought from shops like Harrods, Woolworths, Selfridges and specialists).

Standards for telecommunication equipment which may be attached to the public network are to be set by the British Standards Institute—until now this has been done by the Post Office. Approval for equipment meeting these standards will come from the British Equipment Approvals Board (BEAB).

Companies will also be licensed by the Department of Industry, which is where there is some flexibility to protect British industry. The DoI is likely to look at how open a foreign company's home market is to British telecommunications manufacturers or whether it intends to manufacture in the UK.

British Telecom will still install and maintain the first telephone in each household, ostensibly because it makes it easy to determine whether a fault is on the public network or is in the privately installed equipment.

Over three years, more and more complicated telephone equipment will be licensed by the Department of Industry for competition with British Telecom. The last area to be opened up is likely to be small and medium sized private automatic branch exchanges (PABX). At present British Telecom has a monopoly on the supply and maintenance of any PABX with less than 100 lines.

Old fashioned

Until recently British Telecom has only been able to supply very old fashioned PABXs based on outdated electromechanical technology. At the end of last year it introduced two modern small PABXs, the Herald and the Monarch. Both are sophisticated electronic exchanges which would be competitive in an open market although they are rather expensive. Prices are falling as production increases and more of the electronics becomes integrated.

GEC and Plessey are manufacturing Monarch which was designed by British Telecom's research laboratory at Martlesham. It has up to 120 extensions. The smaller Herald was developed by TMC, part of Philips the Dutch electrical giant, and is also made by Standard Telephones and Cables, part of ITT, in Northern Ireland.

However British Telecom last year broke with tradition by deciding to buy small cheap PABXs from a fast-growing Canadian company, Mitel.

The decision, which caused consternation among traditional suppliers, STC, GEC and Plessey, was part of British Telecom's response to the proposed monopoly relaxation. One of the reasons the monopoly is being relaxed is the fact that in *London* last summer some customers found it was taking more than a year for a telex, private circuit or PABX to be installed.

The traditional suppliers objected to British Telecom changing its purchasing rules by suddenly relaxing its stringent technical requirements to accept the Mitel PABX. Some of the manufacturers have blamed the high technical requirements required in the UK for their inability to export equipment because of the resulting high cost.

There are indications that British Telecom is responding rapidly to the forthcoming relaxation of the monopoly. Many people believe it is behaving unfairly by taking advantage of an intermediate period between the announcement of the details of the legislation and the enactment of that legislation.

British Telecom has said it is going into businesses which previously it showed little enthusiasm for. It is to start an experimental satellite communications system for business in 1983, using satellites launched by the European Space Agency. It is also to introduce a teletex service early next year.

Undoubtedly British Telecom will still be in a strong position even when its monopolies are relaxed. However, there are a number of elements in the Bill which it strongly opposes, particularly because they will exacerbate its perennial financing problems. It is strongly opposed to the alternative network being looked at by the Cable and Wireless consortium because it would cream off some of the most profitable business.

British Telecom has been in a continual battle with the Government over financing its capital expenditure programme to modernise the network. This year it wants to spend at least £2.2bn on capital expenditure which will have to be largely financed internally because Government cash limits restrict its borrowings to £180m.

It has sought, with the backing of manufacturers, unions, and users, and the Department *of Industry, to increase its* borrowings by over £300m. It has suggested launching a telecommunication bond to raise private finance but this has not been countenanced by the Treasury which says it would still count against Public Sector Borrowing Requirement.

The manufacturers have remained concerned at British Telecom's financing problem as they face the prospect of possible order cuts.

The main exchange equipment being installed at present is the TXE4 semi-electronic exchange, and the first more advanced TXE4A has recently come into operation. There are fears that other exchange equipment orders might be cut.

The recession, together with high tariff increases last year, has added to British Telecom's financing problems as the growth in telephone traffic has slowed considerably.

Industry welcomes MoD contract

DEFENCE

MICHAEL DONNE

AT ABOUT the end of this month, the UK Ministry of Defence is expected to decide upon a contractor for a new military communications satellite programme, costing about £100m, for service from the mid 1980s. The Ministry has received proposals for the new satellite system from both Marconi Space and Defence Systems (MSDS), and the Dynamics Group of British Aerospace.

The contract, for "Satcom/Skynet IV," as the system will be known, will call for up to three satellites, two in orbit and one spare, for service from the end of 1984 until at least 1995, and the system will provide virtually instantaneous links for the UK forces at home and overseas with the Ministry of Defence in London.

The system will undoubtedly enhance the efficiency of UK defence communications considerably, but it has further military and industrial implications. It is now quite clear that the trend in defence is towards the increasing use of satellites, not only for direct communications purposes but also for observation and perhaps even eventually for direct warfare purposes, to hunt and destroy enemy satellites.

While the latter may be some way away (although the U.S. is believed to be much closer to the development of "hunter-killer" satellites than many believed possible even a year or so ago, as a result of the development of the Space Shuttle or Manned Reusable Space Transport System), the other uses for satellites are already considered indispensable.

Essential

Communications by satellite, apart from their familiar commercial uses in telephone, television and other civilian roles, are now an essential element of international defence communications, providing links between Royal Naval ships at sea, submarines and other mobile or permanent stations over most parts of the world where British forces may be present.

The original UK Satcom/Skynet II system has for some years successfully provided this type of communications. When launched in 1974, Satcom/Skynet II was the first operational communications satellite designed and built outside the Soviet Union or the U.S., and it put the UK at the top of the European space league. But after Satcom/Skynet II, the UK Government decided to depend upon NATO and U.S. satellites for future systems, and the follow-up to the Satcom/Skynet II was cancelled.

However, the demand for satellite communications has been growing so rapidly in recent years, and the requirement for a new system has become so crucial, that the Ministry of Defence has decided to return to the principle of an independent UK defence communications satellite system by late 1984.

Whichever way the MoD's contract decision goes, it can only be welcomed by British industry.

The UK defence establishment's use of satellites is minuscule compared with that of the U.S. and the Soviet Union, and anything that enhances its knowledge of the various benefits of satellites — and also of how to put such devices to practical use — must be invaluable.

But the Defence Ministry contract will have other benefits, in that it will do much to enhance the development of British industrial satellite technology at a time when many other nations are gathering such knowledge at a rapid rate. It will enable whichever party wins — either MSDS or British Aerospace Dynamics Group — to compete from a stronger base for a share of the growing world market for communications satellite contracts of all kinds, and not only military.

The MoD's Satcom programme *will not only generate new jobs* in the UK at a time of high unemployment, but it will also ensure for this country a total capability in satellite engineering, and enable the winning contractor to bid for other defence communications contracts that are in the offing.

These include the NATO IV satellites, but there are also some extensive civilian satellite programmes on the way, such as bigger versions of the International Telecommunications Satellite Organisation (Intelsat) programme, and satellites for the Inmarsat (International Maritime Satellite Communications Organisation).

Joint venture

Marconi's rival in the bidding for the UK contract, the Dynamics Group of British Aerospace, shares Marconi's view of the importance of the deal to British satellite capabilities of the future.

In addition to making a direct bid for the contract, however, BAe's Dynamics Group has also put together a proposal to the MoD based on the concept of leasing military satellite capability to the Ministry. It has formed a joint venture with the U.S. Comsat General Corporation, whereby it would manufacture the satellites and lease them to the UK Government, thereby relieving the financially hard-pressed MoD of the need to invest large sums at the beginning of the programme.

Instead, payment would be deferred until the commencement of the service, and would be directly proportional to the use made of the satellites by the MoD.

This concept of joint development and leasing of military satellites is being pursued by British Aerospace Dynamics Group and Comsat General elsewhere, and these future defence communications systems would, if won, provide a substantial overall benefit to the UK satellite manufacturing industry and to the UK economy as a whole.

Comsat General Corporation in any event is already under contract to the Royal Navy to supply a defence communications system through the existing Marisat satellites, which have been providing communications facilities for the U.S. Navy since 1976.

The Collective expertise of Comsat General and the British Aerospace Dynamics Group combined with the experience gained from the Marisat operations, has formed the basis of the joint proposal made to the MoD.

American flair accelerates progress to a 'wired society'

UNITED STATES

GUY DE JONQUIERES

THE AMERICAN communications industry is exploding. Like most explosions, the phenomenon is not a controlled process but a violent and unpredictable upheaval which seems certain to transform profoundly the environment in which it is occurring.

As in many other countries, it has been detonated by rapid advances in technology, coupled with sharp declines in hardware and manufacturing costs. It has been given added momentum by the vitality and adaptability of the U.S. economy and the American flair of technological innovation.

Indeed, the vision of a "wired society," in which every home and office is linked to a vast electronic communications network, seems likely to be realised first in the U.S. Many forecasts have suggested that a computer terminal will be as common a feature of American living rooms by the end of this century as the telephone and television are today.

Demand for new services is growing apace, especially in business. It has been estimated that U.S. businesses spend more than $300bn a year communicating information, and that this sum will more than double by the end of this decade.

Alternatives

At present, a substantial proportion of this sum is spent on traditional methods of communication, such as the distribution of documents by mail and travel to and from business meetings. But increasing costs are expected to lead many companies to turn to faster, more efficient and, in the longer run, cheaper alternatives made possible by the application of modern technology.

These include such techniques as electronic mail, an umbrella term embracing devices like high-speed facsimile machines and communicating word processors, and video-conferencing, which enables people in remote locations to hold meetings over closed circuit television.

The already promising growth of such new facilities was given an extra boost early last year by the Federal Communications Commission. In a landmark ruling, it voted to deregulate entirely so-called "enhanced" communications services, which combine telecommunications and data-processing.

The decision stemmed from the Commission's conclusion that it was no longer feasible to distinguish between communications, which fall within its jurisdiction, and data-processing, which does not. It was also intended to stimulate competition by making it easier for newcomers to enter the market.

It has certainly had the desired effect. Companies have been stampeding to enter the market or expand their existing positions in it. They include such giants as General Telephone and Electronics, the second biggest U.S. telephone company, Xerox and International Business Machines, which is a partner in Satellite Business Systems, a joint venture with Comsat and the Aetna insurance group.

The Commission also decided, in a politically controversial move, to open the door to American Telephone and Telegraph, operator of the country's biggest telephone monopoly. It stipulated though, that AT&Ts "enhanced" services operations must be handled by a separate arm's length subsidiary, to be set up no later than March of next year.

AT&T has announced that it proposes to set up such a company, known as "Baby Bell," and transfer to it $10bn in assets and 100,000 employees. But its plans have been sidetracked, at least temporarily, by a barrage of protests and objections fired against the Commission's decision.

Many of AT&T's smaller competitors, actual and potential, have challenged the decision in court. They fear that if the company is allowed to operate in the enhanced services market, even through a separate subsidiary, it will soon establish a position of dominance similar to that which it has long enjoyed in telephone communications.

AT&T's resources are certainly awesome. Its assets of $125bn are the biggest of any company in the world, and its revenues last year exceeded $50bn. Through its 23 operating subsidiaries it serves 80 per cent of U.S. telephone subscribers and its manufacturing subsidiary, Western Electric, ranks 19th in the Fortune 500.

Even more serious for AT&T than the protests of its competitors is the opposition of the Justice Department. It claims that the Commission's decision to allow AT&T to compete in the enhanced services market violates a 1956 consent decree *prohibiting the company from* entering any unregulated business.

AT&T has asked a New Jersey court to over-rule the Justice Department's objections. It is seeking a quick decision, as it now has only a year in which to meet the Commission's deadline for the establishment of Baby Bell.

But even if AT&T obtains a favourable judgment, it must still contend with the mammoth seven-year-old anti-trust suit brought against it by the Justice Department, which reached trial early this year. The action alleges that AT&T has used its market power to inhibit competition and seeks to have the company broken up into a number of different parts.

Soon after the trial opened, AT&T and the Government tried to reach a negotiated settlement of the case. But the talks lapsed when the Carter Administration left office. In spite of calls from within the Reagan Administration, notably from the Defence Secretary Mr. Caspar Weinberger, that the case be dropped, the trial seems *likely to run its full course.*

Since the action was launched seven years ago, competitive conditions in the communications industry have changed considerably, due to shifts in the policy of the Federal Communications Commission and a succession of court judgments in cases brought by AT&T's competitors.

Monopoly broken

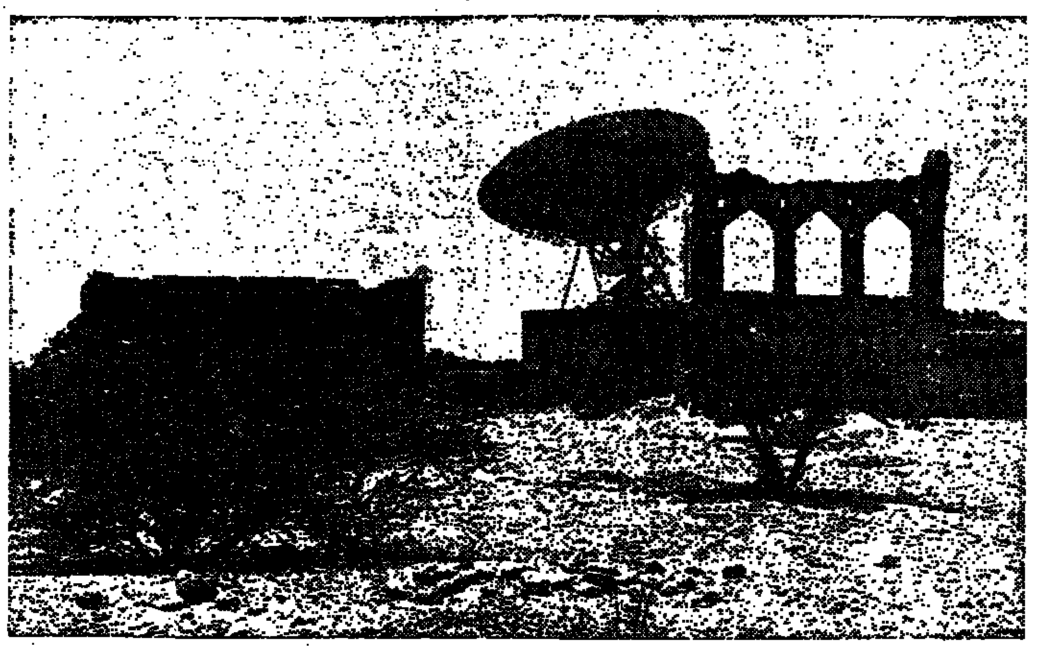
AT&T is no longer permitted to monopolise the supply of telephone apparatus attached to its Bell System network. Even more important, it is obliged to allow competing long-distance telephone services to connect with its local subscriber circuits.

A growing number of companies are offering such services, using microwave radio transmission or satellites. They are able to undercut by as much as 50 per cent the Bell System's long-distance rates because, it is alleged, the latter are kept artificially high to subsidise AT&T's uneconomic local network.

So far, these competitors have barely dented AT&T's business. Their combined revenues last year amounted to only about $400m, a mere fraction of the $20bn which Bell earned from its long-distance traffic, which is still growing strongly.

But in the longer term, the competitive pressure on AT&T could grow more intense. Some industry experts believe that it may be forced to respond by adopting more aggressive pricing policies, designed to shake off some of its smaller rivals.

But though it wields enormous power, the choices before AT&T are not easy. If it lowered its long-distance tariffs, its profitability would suffer. On the other hand, it could raise charges for the use of its local network. But such a move, as well as being politically unpopular, could stimulate its competitors to start building subscriber networks of their own and thus lead, in the long run, to even tougher competition.



International traffic to and from Oman travels via the satellite tracking station at Al Hajar. It provides 96 circuits

Competition likely to be tougher in the 80s

MIDDLE EAST

MARK MEREDITH

THE VAST strides of economic growth in the Arab world within the past decade have coincided with even greater leaps in the advancement of telecommunications. Efficient and effective telephone and telex systems are an integral part of industrial growth; indeed an axiom in the communications businesss says that supply creates demand — more telephones create demand for yet more telephones.

If the 70s, especially since the 1973 oil price rise, were a period for rapid telecommunications growth, the 80s are likely to be a time of more discriminating and sophisticated growth in this field.

Business will be tougher, customers more demanding, *competition hotter and politics* possibly even more unpredictable.

Arab governments are now throughly experienced in the pressures which surround big industrial contracts. They can be expected to drive much harder bargains, be far more discriminating in their demands and require much more advantageous financing.

What has been achieved? To name but a few, multi million dollars contracts are underway to install computerised digital exchanges in Saudi Arabia, to modernise Cairo's creaking telephone system, to set up thousands of new lines in Jordan and to construct microwave links in Syria.

In Bahrain alone, telecommunications are said to have grown by 600 per cent in the past 10 years, making the island one of the most advanced of the entire region in the field.

Bahrain is typical of Arab states building up their service industries as a vital economic backup to the oil industry. The *island's* expanding offshore banking and industrial areas have fostered an impressive communications system using cable, microwave, tropospheric scatter and satellite links.

Throughout the Middle East the growth rates in telex and telephone traffic are likely to continue to be between 25 and 40 per cent a year. But some analysts reckon to see some signs of "maturing" to use the jargon as growth rates settle down to a level more in line with the 10 to 15 per cent increases recorded by western industrialised countries.

Satellite

As communications companies for business in the Middle East they will also likely find increasing demands for what the industry calls "network management"—the extensive requirements for servicing a newly installed telecommunications system. Network management also covers working out the necessary fallback positions for telecommunications in case of major breakdowns.

One of the principal telecommunications events of the 80s should be the launching of the first Arab communications satellite between 1983 and 1985.

Arabsat is significant not only in terms of contracts—an estimated $150m for the space segment alone. But it is likely to be the first of several projects by third world regions to set up their own space communications independent from the existing Western commercial satellites.

The Arab Satellite Communications Organisation is made up of the 21 members of the Arab League, each of which owns a share in the project.

Arabsat will handle telephone and telex as well as broadcast links between the Arab world. It will link the North African Mahgreb to the Gulf and southern states such as Sudan to Syria in the north.

Under the plan, two satellites will be launched into orbit over Egypt. One will act as standby. A third satellite will be held ready for launching. Each satellite will provide up to 17,000 telephone channels, seven channels for TV distribution and one community TV broadcasting channel.

The project will mean considerable savings in communications costs for many members. At present countries like Qatar are paying punitive fees to transmit regional telephone and telex traffic through Intelsat, the international satellite system.

Lower cost

The cost of the earth station for Arabsat subscribers—a dish only three metres in diameter —will also be much less than the giant stations required for Intelsat.

Consultant for Arabsat are presently examining bids for the space segment. These include tenders from British Aerospace in association with both Matra and Thomson CSF of France, Aerospatiale of France, Hughes and RCA of the U.S. and SPAR Aerospace of Canada.

Another competition is to be held to find contractors for the ground segment of Arabsat, including installation of ground receiving and transmitting stations.

A successful launch of an Arab satellite will be watched by other regions, including Latin America and Australasia which may plan their own launchings.

A more sober appraisal of the satellite project is given by communications men working the region's existing systems who feel there is more scope for microwave, cable and tropospheric scatter systems within the Arab world.

Arabsat shows that the Arab world wants to run things its own way—even on such an advanced and politically vulnerable scale.

But there are other much more down to earth indications of the region sorting out its telecommunications. For instance, the Kuwait Institute for Scientific Research has developed an Arabic telex with the complete 64 letter forms of Arabic. Telex has previously been limited to 48 characters but using microprocessors the Institute has been able to produce a perfect Arabic text.

Foreign companies allowed to tender for equipment

JAPAN

CHARLES SMITH

JAPAN EMERGED from World War Two with only 1.5m telephone lines serving a population of more than 75m. Today, with the population just touching 115m, there are 37m telephones and telephone service is available on demand.

Nippon Telegraph and Telephone, the hugely profitable public corporation which operates the domestic telephone system, boasts that it has raised the rate for a three minute call only once since it was set up at the behest of the U.S. Occupation authorities in 1952.

Telephones (and telecommunications in general) are, in fact, one of Japan's many success stories although NTT has also been at the heart of one of the country's bitterest overseas trade disputes.

Prolonged pressure by the U.S. Government for the lifting of a ban on overseas procurement by NTT ended late in 1980 when the corporation was finally persuaded to abolish what had previously been known as the "NTT Family" (a short list of Japanese companies which had the privilege of tendering for sophisticated equipment and participating in NTT-sponsored R and D programmes).

Valuable right

From the beginning of April this year, any company (Japanese or non-Japanese) has been entitled to tender for "basic" (i.e., other than high technology) equipment purchased by NTT. American companies, under a bilateral agreement between the U.S. and Japanese Governments, have won the right to take part in high technology tendering as well. Since NTT procures about $3bn worth of equipment a year, this "right" is a potentially extremely valuable one.

Until 1952, Japan's domestic and international telecommunications networks were the responsibility of a Ministry of Telecommunications — whose capital needs were supplied directly from the national budget.

The decision of the American GHQ to establish a public enterprise corporation to operate domestic services, and a private company (Kokusai Denshin Denwa) for overseas communications was based on the idea that private sources of capital needed to be tapped if telephone services were to be expanded rapidly enough to meet the country's needs.

NTT, in fact, raises money both from the Japanese domestic capital market and from foreign markets (it has issued dollar, D-mark and Swiss franc denominated bonds to date). Its charter allows it to require every new telephone subscriber to buy a Y80,000 "user" bond at the time of installation (in addition to paying installation costs). Such bonds are usually resold on the secondary market immediately after purchase. In addition to "user" bonds, the corporation makes regular yen-denominated bond issues.

The right to tap Japanese and foreign capital markets made a crucial contribution to NTT's early growth but today the corporation finances over 60 per cent of its development and construction costs from internal resources.

NTT's annual construction budget passed $1bn a year in 1963 and is now running at just under $7bn. Its annual rate of new telephone subscriber lines has tailed off from over 3m a year in the early 1970s to around 1.5m at present. Investment in fields other than subscriber lines however continues at a high rate.

NTT is just beginning to instal optical fibre in place of coaxial cable on some of its medium capacity lines. The corporation is also upgrading its telephone exchanges from the traditional "step-by-step" type (now accounting for only 5 per cent of the total) to cross-wire (80 per cent) and DEX electronic exchanges (15 per cent). No digital exchanges have been installed in Japan yet, but private Japanese companies have produced and exported digital exchanges.

Unlike privately owned American telecommunications companies, NTT has no manufacturing division of its own. It does however maintain a large research and development division where almost all high technology equipment used by the corporation has been developed to date. The corporation's three electrical communication laboratories employ about 3,100 staff of whom 85 per cent are technically qualified researchers.

Orders shared

Research, up to now, has been done in co-operation with selected Japanese companies who manufacture prototype equipment which is then further tested by NTT before final orders are placed.

NTT frequently works with more than one company at a time on a given project, sharing orders between the participants in a development programme when the final product emerges. The corporation says that it is now willing to include U.S. companies in its joint research programmes.

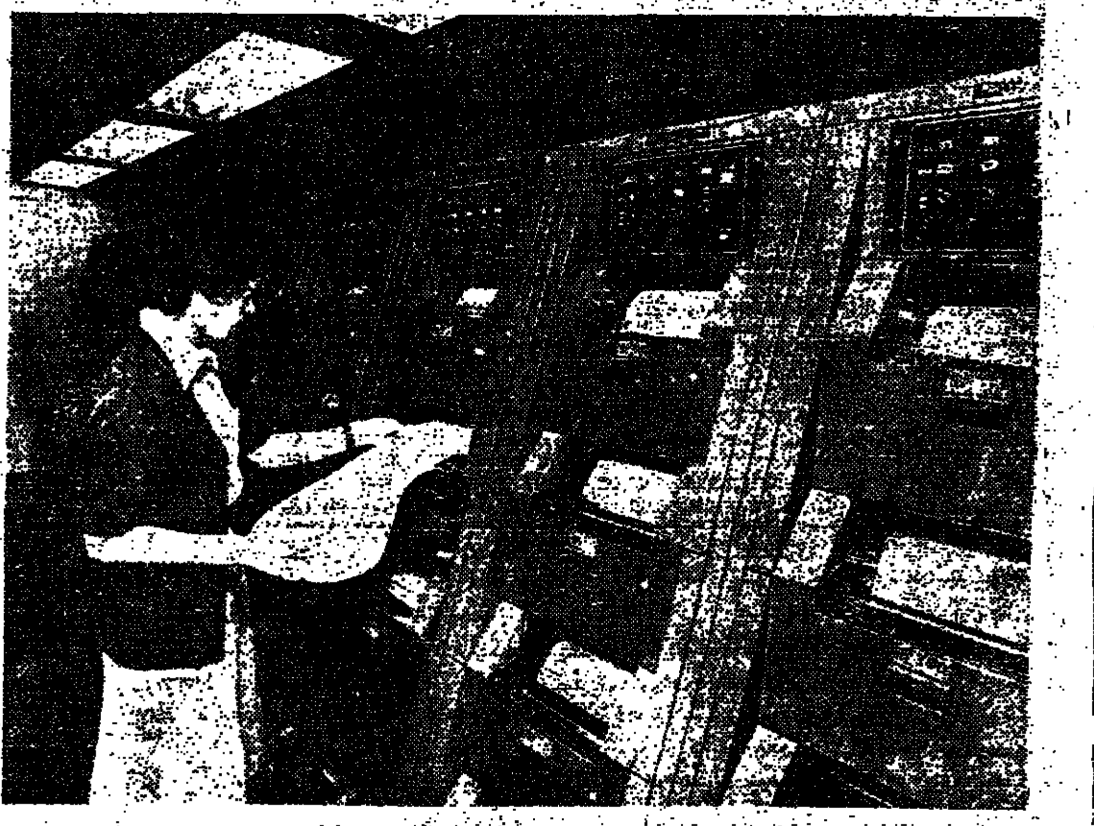
Similar access has not yet been granted to European companies and may only be granted in return for Japan being granted access to telecommunications procurement in Europe.

NTT's charge for a three minute local call (on a public or private telephone) is currently set at Y10 (a little less than 2p at the current exchange rate). Its long distance charges however rise steeply making Japan a fairly expensive country in which to place trunk calls.

The present rate structure (introduced in 1976 when the local charge went up from Y7) has proved highly profitable, giving NTT earnings ranging between Y390bn and Y452bn on revenue of Y3,400bn to Y3,800bn during the three years up to 1979.

NTT's profitability has caught the attention of both the Japanese mass media and of the Government. As a result the corporation has had to yield to pressure to introduce concessionary rates on off-peak calls. It has also been obliged to pay a special tax on its assets assessed at Y120bn a year for the next four years.

Kokusai Denshin Denwa, the private company which has a monopoly of Japan's overseas telecommunications, also has a record of high profitability. The company has yielded to pressure to reduce its rates, but rates on overseas calls remain high compared to those made from other countries. In addition to operating telephone services, KDD is responsible for overseas telex and facsimile.



The telex incoming monitoring section at Mitsui Communications Division in Tokyo

£8bn programme could lead to a place in world market

ITALY

RUPERT CORNWELL

ITALY'S telecommunications industry is in a state of flux unmatched in decades. Simultaneously, three related problems have surfaced, each requiring urgent treatment. There is the financial weaknesses of the industry, at least in that portion of it controlled by the public sector, through the State-owned IRI conglomerate; its organisational anomalies, symbolised by the fact that Iris telecommunications holding company (STET) is at once in charge of not only SIP, the country's main telephone utility, but also of several of Italy's main equipment manufacturers overwhelmingly dependent on SIP for their orders; and finally the question of what technology should be adopted to carry out the required modernisation of the Italian telephone system.

This last represents an investment programme of anything up to L18,000bn (£8bn) over the next few years, and offers Italy the chance of belatedly becoming a major league entrant to the booming international telecommunications market, as the change over to all-electronic switching technology takes place around the world.

The trouble is however—as always in Italy—that while plans to remodel the entire sector abound, concrete decisions, so far at least, are in decidedly short supply. It may be that the outstanding issues are settled within the relatively near future. But if they are not, telecommunications could easily become the most depressing example of all of how the country is unable to organise itself in crucial sectors of industry where a competent central government is an unavoidable necessity.

The most tangible process thus far has been made in tackling the immediate financial problems of SIP, which bears the central responsibility for the development of Italy's phone network, currently boasting some 14m subscribers.

Earlier this year IRI and STET came up with a package of financial aid totalling (on paper anyway) L800bn. This was then supplemented by March's decision from the Government to authorise a 12 per cent tariff increase for SIP. As a result the utility should be able to go ahead with its ordering programmes for 1981 and 1982, banishing the spectre of massive layoffs at its main suppliers, most notably at Italtel (formerly SIT-Siemens), the telephone exchange manufacturer, which derives over 50 per cent of its business from SIP.

Distortions

Paradoxically however, the settlement of SIP's most pressing financial worries has focused attention on the strange distortions in the structure of the State's telecommunications interests. In fact not one, but four, separate concerns are involved in the management of the Italian phone service. Responsibility for commercialisation, revenue collecting and overall development of the system rests with SIP. In return for this however, SIP does not have entitlement to all the proceeds. A separate concern, ASST, receives a portion of the revenues from long distance calls in the country, while international calls to and from Italy are the privilege of a third company, Italcable. A fourth, Telespazio, is in charge of satellite phone business. All four are subsidiaries of IRI and yet while SIP has lost money very heavily, ASST is constantly in the black.

These anomalies have been recognised by the recent measures by the Government, which cuts the licensing payments from SIP to ASST to 0.5 per cent of the former's long distance revenue from the previous 4.5 per cent. But the obvious step, the rationalisation of SIP, ASST, Italcable and Telespazio into one coherent unit, has yet to be taken.

Perhaps even more pertinently, it is asked why STET should have effective control of both the utility and of key equipment manufacturers. These last in the IRI stable include not only Italtel, but Selenia and SGS-ATES. The critics say that the present arrangements stand in the way of more effective competition and shield inefficiency. The intense debate about the reorganisation of the Italian industry for the next generation of switching technology has merely turned the spotlight more brightly than ever upon this curious state of affairs.

In essence, Italy is trying to achieve the reshaping of its industry that France, in its highly centralised "dirigiste" fashion, pushed through five years ago to ensure Gallic entrance in the race for the massive markets of the future. In Italy, such a process will necessarily involve a far-reaching re-ordering of relations between the public sector and the major private groups which will perforce be involved—in particular Olivetti, the electronics and office equipment group, and Fiat, via its transmission, fibre optics and control system subsidiary Telettra.

What industry strategists envisage is the creation of a kind of consortium which can offer a complete telecommunications system package. Its hub, without doubt, will have to be Italtel—for all the latter's financial difficulties (its 1980 losses are said to have been L15bn or more on turnover of around L500bn (£220m)).

For almost 10 years, Italtel has been developing its own all-electronic exchange, called Proteo. Although it has been dogged with problems, experimental operations of Proteo are now yielding encouraging results. The second component of the group will certainly be Telettra. Indeed, outline agreement for tighter co-operation between the two concerns has at last apparently been reached, and is expected shortly to be officially announced.

The third element in any equation will be Olivetti, whose determination to enter the key area of telematics has frequently been underlined by its chief executive, Sig. Carlo de Benedetti. Rumours have abounded over what shape Olivetti's interest in a new association will be. It has been suggested (and denied) for example that Fiat will be selling Telettra to Olivetti, that Olivetti will exchange participations with STET/Italtel (also denied), and that Olivetti will be taking a substantial minority stake in SGS-ATES (a move, if not out of the question, which would appear to be somewhat premature). The permutations are many, but firm decisions are still conspicuous by their absence.

New company

The final ingredient in any equation is likely to be a foreign concern. The choice lies between three—Ericsson of Sweden, ITT and GTE, with whom Olivetti is believed to have been conducting negotiations. But thus far all that is certain is the fact that the Ivrea-based concern has hived off its telecommunications operation into a new company, Olteco.

Not the least intriguing aspect of the criss-cross of negotiations, contacts and feelers under way is that they will in one form or other lead to a much greater cross fertilisation between private and public sector industry, and conceivably might lead to a partial privatisation of the latter. The trouble though is that someone will have to cut the Gordian knot, and the present Government is as strife torn as any in recent history.

Hitherto Italy's phone system has worked relatively well. But, without new guidelines there is no guarantee that this state of affairs will continue.

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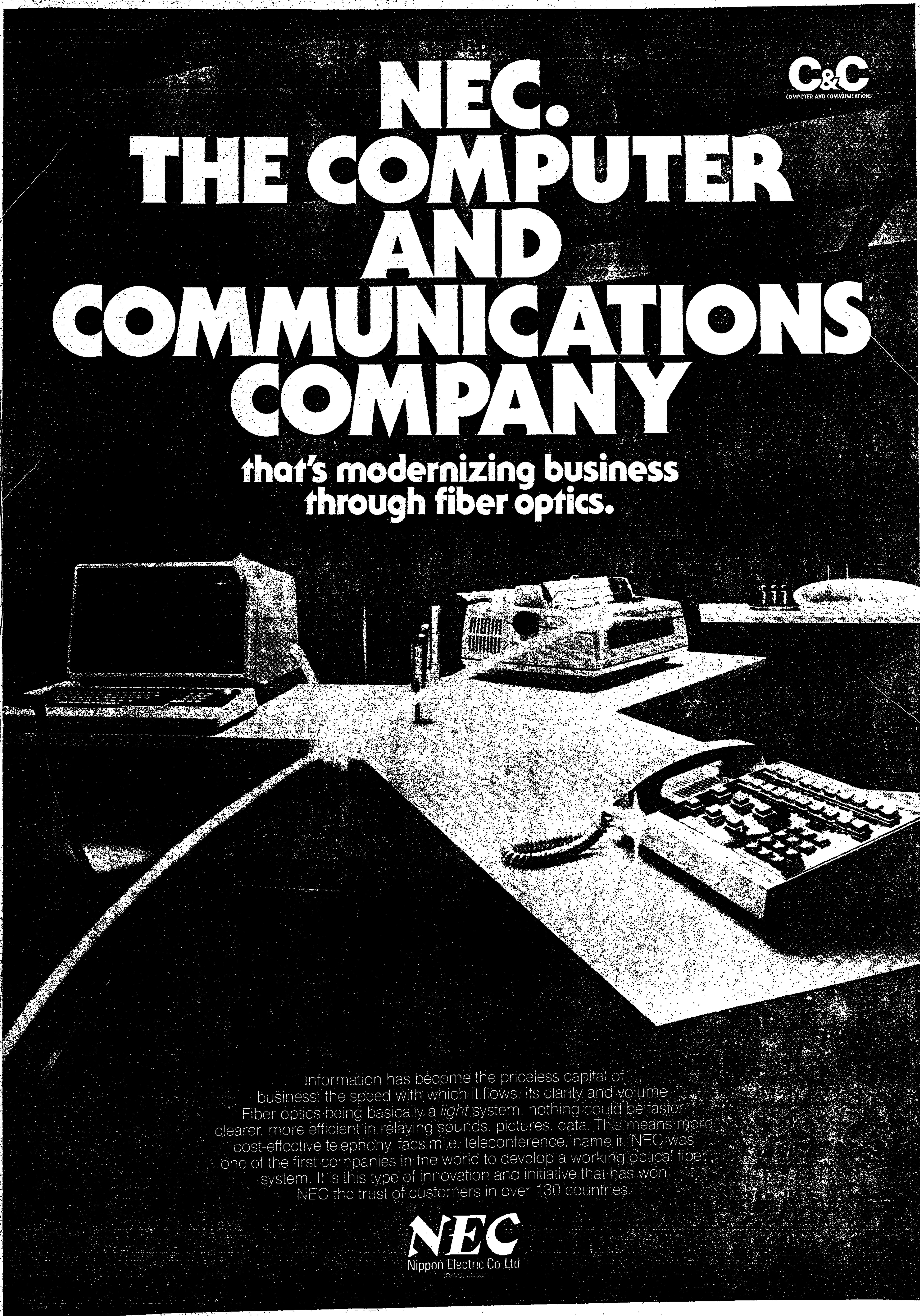
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Information has become the priceless capital of business: the speed with which it flows, its clarity and volume. Fiber optics being basically a *light* system, nothing could be faster, clearer, more efficient in relaying sounds, pictures, data. This means more cost-effective telephony, facsimile, teleconference, name it. NEC was one of the first companies in the world to develop a working optical fiber system. It is this type of innovation and initiative that has won NEC the trust of customers in over 130 countries.
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Updated phone system gives room for experiments

FRANCE

DAVID WHITE

A SERIES of telecommunications experiments are being conducted in towns scattered across France. The towns have been prudently chosen so as not to strike fear into the hearts of the citizenry who might think their way of life was being revolutionised all at once.

In Vélizy, south of Paris, keyboard television terminals, already installed discreetly in the homes of a handful of telecommunications employees, are due to be distributed free in June and September to 2,500 telephone subscribers for the first full-scale testing of the country's Télétel system. This is a key step in the science for which the French three years ago saw fit to coin a name—*télématique*.

In the Ille-et-Vilaine region of northern Brittany, a quarter of a million subscribers are due to receive rather similar terminals to replace their printed telephone directories, a scheme already tested there in the port of Saint-Malo with disputed results.

Videophones

In Biarritz on the Basque coast, a "wired city" experiment using lasers and optical fibres instead of conventional cables will give 1,500 people the chance, from the first half of 1983, to try videotelephones. In common with the submarine, the helicopter and the space rocket these are on the list of things foreseen almost a century ago by that most translated of French storytellers, Jules Verne.

The intense activity of French companies in high-technology telecommunications sectors stems from the momentum created in a short space of time by the rapid updating of the country's telephone system.

Ten years ago France was a backward place when it came to telephones. Since President Giscard d'Estaing came to power in 1974 the number of lines has increased from 6.2m to 16m. The forecast is 28m lines for 1987 and 34m lines for 1992.

The number of telephones per 100 inhabitants has increased from 12 — a figure which placed France at the bottom of the European list, after Italy and Belgium — to 29. Although this is still behind West Germany, Britain, the U.S., Switzerland and Sweden, and although it still takes over four months on average to get a phone installed, the service has improved vastly. Dialing a number is no longer a major time-consumer, and the spare ear-set still attached to most receivers has become redundant. Over the years the cost of making a call has dropped in real terms.

The country which tried out the first-ever time division switching apparatus is now in the forefront of countries using this system. The French telecommunications industry, based on two big groups, CGE (through its subsidiary CIT-Alcatel) and Thomson-CSF, has been reorganised by a comprehensive policy covering an ambitious range of new products.

All this has meant a virtual carte blanche for the French Post Office to raise funds. Investments in telecommunications totalled FFr 91bn (£8.3bn) between 1975 and 1980, a little below the budgeted amount for carrying out the programme. This year's Post Office budget includes a further FFr 26bn (£2.4bn) in this sector.

Its telecom division, the Direction Générale des Télécommunications (DGT) whose research offshoot CNET in Rennes plays an important role in the development of new technologies, ranks as the biggest profit-making enterprise in France. Its results for 1979 showed a profit of FFr 7bn on turnover of FFr 36bn, and last year's were even higher.

The DGT, headed by 48-year-old M. Gérard Théry, is the epitome of the role the Government can play in French industrial life. Its free hand in spending and its ability to co-ordinate and plan the affairs of a private-sector branch of industry is sometimes viewed with envy, especially from the other side of the Channel, sometimes with intense irritation by those, American or French, who find its behaviour high-handed.

The Government-directed restructuring of the industry, which began before the change-over to digital systems, with he transfer to Thomson of two key multinational subsidiaries, the French offshoot of Ericsson of Sweden and ITT's Le Matériel Téléphonique (LMT), has been pursued more recently in other related sectors.

A first electronic components plan, launched in 1978, partly in response to the needs of telecommunications companies and based on three joint ventures—Thomson with Motorola and the French Government's Atomic Energy Commission, Saint-Gobain-Pont-à-Mousson with National Semiconductor, and Matra with Harris—has recently been extended. Matra Harris Semiconductors has launched this second stage—an afterthought to the first—with a new joint venture with Intel of the U.S., negotiated only weeks after the start of production.

Another joint venture is being put together for the manufacture of optic fibres, under the control of Saint-Gobain-Pont-à-Mousson, which besides being a glass producer is a growing force in electronics, having taken over CGE's shareholding in the Cii Honeywell Bull computer group and turned it into a controlling stake.

Thomson is being brought in as a minority shareholder in the fibre optics venture, as is Corning Glass, the world leader in this technology.

This DGT-devised formula means that the other group with interests in the sector, CGE, is left out, although it has hitherto had an exclusive agreement with Corning Glass. CGE intends to keep its hand in, specialising in submarine cables, industrial and military applications and export opportunities. But it will be in the position of client of the new joint venture, at least until such time as a second production unit is needed.

Key element

In order to strengthen its position, CGE has signed a components pact with a specialised U.S. company, Laser Diode Laboratories.

Access to the U.S. market is a key element in all these French companies' strategies. Recent deals with U.S. groups have included CIT-Alcatel's purchase of a 25 per cent stake in a California components company, Semi Process Inc, and the acquisition by SAT, a smaller company due to play a large role in the Biarritz experiment, of 40 per cent of Interconnect Planning Corporation, a private telephone equipment concern.

Thomson, which has a U.S. telephone exchange subsidiary, Telecommunications Switching Systems, has gone into a series of new deals, dispelling its reputation of being unenthusiastic about the field of *télématique*. The most recent was an agreement with Continental Telephone, under which $400m is due to be spent on two joint ventures in the next five years. This followed links with 3M on a Thomson-model facsimile transmitter, an agreement with Xerox for development of optical storage discs and the sale to GTE of screen-and-keyboard terminals.

Exports have become essential, not only for economies of scale in advanced-technology areas, but also to preserve jobs. A couple of years ago, President Giscard said it would be "a scandal" if jobs were lost in this of all sectors. But all the big telephone concerns have been shedding workers.

Thomson's sale of a radio broadcasting system to Iraq in preference to Plessey, which was not in a position to accept the same liability terms in the contract, was ample demonstration of France's determination in this field. Thomson's MT20 and, even more so, CIT-Alcatel's E10 digital switching systems have been sold worldwide, from Ireland to Egypt.

On the home market, they have been protected at the expense of ITT's subsidiary CGCT, which has been unable to sell its Systeme 12 exchange. After threatening to pull out of France, the ITT unit has proceeded to cut a tenth of its workforce.

In the new sectors, France inaugurated a packet data transmission system, Transpac, at the end of 1978. In *télématique*—the area that combines the use of television with computers and the telephone—France has reached preliminary agreements for its Antiope system in the U.S. but, unlike the British rival Prestel, does not have it in operation.

The other system, Télétel, which provides for dialogue between subscribers and for long-distance credit-card payment, will have to await the 18-month experiment in Vélizy.

The electronic telephone directory is designed to replace standard telephone directories in 15 years' time. The high cost has led to doubts about its worth, but the Post Office is clearly counting on further possibilities for marketing services once consumers have been persuaded to accept the terminals.

France's first domestic telecommunications satellite is due to go into orbit in 1983, Matra being the main contractor in collaboration with Thomson-CSF, which in turn collaborates with CIT-Alcatel in an earth station venture.

All these, and other ventures in telecopiers, videodiscs, and private telephone exchanges, *not to mention the FFr 400m* being spent on the Biarritz fibre optic experiment, are something of a gamble in the face of international competition—and in some sectors American and Japanese leads.

A Government-sponsored report at the end of last year pointed out the weakness in areas such as micro-components and said a concerted investment effort would be required during the remainder of the century to "get a grasp" on the whole range of information technology.

Country's leaders place great emphasis on the future

WEST GERMANY

STEWART FLEMING

EARLIER IN the month, West Germany announced that it was to launch some DM 6.3bn of loans on the international markets in coming months, jointly with France, with the intention of using the proceeds to help stimulate investment.

Among the areas expected to receive a share of the proceeds, along with energy saving, is the West German telecommunications industry, thus underlining once again just how much emphasis has been put on the future of the industry by political and industrial leaders in the Federal Republic.

Telecommunications, and the increasingly related fields of data processing and microelectronics have already for several years been among the industrial sectors which have been most heavily supported by the Ministry of Research and Technology, which channelled over 10 per cent of its annual DM 9bn of resources into these fields last year.

There are several reasons why the telecommunications sector attracts such attention. One is the economic significance of the Bundespost, the public telecommunications authority which has a central role in the telecommunications networks, including not only the telephone system but also the more recently introduced special services for data processing communications and facsimile transmission.

Thus in 1979, the Bundespost, which is one of the largest commercial undertakings in Germany with (then) around 469,000 employees, invested some DM 5.5bn in new plant and equipment, making it again the nation's biggest investor. It is also one of the most profitable enterprises.

Although the labour intensive postal services are something of a problem, one which can be expected increasingly to benefit in time from such developments as "electronic mail" systems such as the Bundespost's Teletex service, the telecommunications services of the Bundespost have been growing rapidly and profitably.

Thus between 1977 and 1979 the Bundespost was, largely as a result of its fast growing telecommunications earnings, able to reduce its indebtedness and finance its heavy capital investment spending from internal resources.

The high level of profitability which the Bundespost has achieved has been to a great extent a reflection of the dramatic increase in the number and usage of telephones in Germany. Thus in 1979, for the fourth consecutive year the Bundespost recorded a net increase of some 1.5m in the number of main telephone connections.

Pricing policy

Between 1976 and 1979 half as many telephones were installed in Germany as in the previous history of the German telephone system. This growth was in part a reflection of a deliberate pricing policy aimed to encourage telephone usage.

The improved profitability of the telephone system has come at a propitious moment. It has coincided with the need to develop the Bundespost's services to make maximum use of the technological advances in the field of telecommunications and with a period when growing concern about levels of Government spending would otherwise be making it more difficult for the Bundespost to finance itself.

The Bundepost itself is making efforts to underpin public support for its programmes and, to ensure that, to emphasise the contribution which an efficient and progressive telecommunications system can make to improving the productivity of German industry and the overall standard of living.

The special services which it has set up to take fuller advantage of the productivity benefits which technological advances have made possible include the provision of a special data processing communications network in 1967, the introduction in 1979 of a special facsimile transmission service, Telefax, and the beginning this year of Teletex, a special text transmission system which is now being tested and will eventually offer an "electronic mail" service.

Plans lie ahead for the integration of some of these services so that each does not have to be used separately, a goal which the Bundepost's critics feel should have been more speedily aimed for.

The benefits which should accrue from the progressive development of the postal telecommunications markets are clearly aimed in part at improving the efficiency of German industry which, because of its widespread dispersion around Germany and the importance of international business, clearly has a big stake in communications. Individual companies, such as telecommunications equipment suppliers like Siemens, can also expect to benefit.

They can expect to be supplying the more advanced equipment which the Bundespost and its customers will be investing in, and in addition, the solid and technologically advanced home market should help them maintain and develop positions in the fast growing international telecommunications markets.

Sky's the limit in the next 10 years

SATELLITES

GUY DE JONQUIERES

OF ALL the new communications techniques which are now being made practical by the application of recent advances in technology, few are exciting keener commercial interest among a broader range of participants than satellite transmission. During the next decade it seems that in more senses than one, the sky's the limit for satellite communications.

Though launching a satellite remains expensive and is still by no means foolproof, once in orbit it offers important advantages over conventional, land-based communications systems. One of these is a high bandwidth, or spectrum of frequencies, which allows large volumes of data to be transmitted very rapidly.

Satellites can handle without difficulty as many as 7m "bits" of digital data per second, compared with less than 10,000 for a conventional terrestrial long-distance telephone circuit. This capacity can be used to carry either a large number of telephone circuits or a smaller number of communications requiring high data speeds, like television transmissions.

Land-based communications are being modernised gradually: British Telecom plans to increase the capacity of its long-distance telephone circuits to 64,000 bits per second by installing links made of optical fibres. But the programme will take several years to complete. Satellites offer the same facilities now for those willing to pay for them.

Satellites can be used, according to the design of the associated equipment, to perform two main types of service. One is to provide two-way communications between selected points within the satellite's "footprint," or transmission area. The second, direct broadcasting, enables broadcasts transmitted from a single ground station to be beamed to receivers installed anywhere in the footprint.

Satellites have been used for some time to provide telephone links both across and between continents, supplementing land-based or undersea cables. But now their potential is starting to be exploited to provide a range of new and varied services aimed, initially, at business users.

Advanced

Predictably, developments are most advanced in the U.S., where demand for services requiring high-speed data communications is expected to soar by as much as 40 per cent annually over the next five years, compared with a forecast growth rate of less than 10 per cent for conventional telephone services.

To cope with this expected boom, the U.S. Federal Communications Commission recently approved plans by nine companies to build and launch more than 20 communications satellites within the next five years. The programmes will more than triple current American satellite channel capacity.

About half-a-dozen companies have announced plans to offer satellite communications facilities which will compete directly with the predominantly land-based network of American Telephone and Telegraph and the other U.S. telecommunications companies.

One of the leaders in the field is Satellite Business Systems, a joint venture between International Business Machine, Comsat and the Aetna insurance company. Backed by financial commitments from the three partners totalling $500m to date, SBS put its first satellite into orbit late last year.

SBS will offer subscribers in the continental U.S. a range of facilities including data communications, telephone links and video-conferencing — two-way communications using live television transmission. Initially, at least, SBS is aiming to serve only the internal communications needs of large companies with scattered operations. The cost of such communications at present accounts for as much as 80 per cent of such companies' total communications bills according to SBS estimates.

Transmissions will be beamed between the SBS satellite and dish aerials installed on the roofs or in the parking lots of customers' offices. The aerials are fairly expensive to manufacture and must be precisely aligned with the satellite to function correctly. The service will not be cheap: monthly charges will start at about $100,000 and could run into several million dollars.

None the less, SBS has already signed up about 20 major customers, including IBM, Boeing and a group of insurance companies. Experience suggests that costs will fall in time, bringing the service within reach of a bigger market. Texas Instruments, whose 50 plants worldwide are linked by its own satellite communications network, has found that the cost of sending a message has halved since the service began 10 years ago.

In Europe, similar services are now being planned by the telecommunications authorities (PTTs) in a number of countries. Late last year, they agreed to several satellites to be launched by France and by the European Space Agency, whose footprints will cover virtually the entire continent.

Market trial

Earlier this year, British Telecom announced that it had decided—with uncharacteristic speed—to launch a satellite business communications service by 1983. A market trial will start this autumn, using a test satellite launched by the European Space Agency in 1978.

British Telecom's eagerness to seize the initiative was prompted partly by the desire to gain a lead before the planned relaxation in its monopoly, due to take effect later this year, opens the market to private sector competitors. A number of companies, including the General Electric Company, Plessey, Cable and Wireless and British Aerospace are studying the possibility of introducing one or more rival systems.

Though British Telecom has said that it plans to offer a variety of services, whose cost will depend on their sophistication and complexity, the economics of its new venture are still not clear. It is not certain, in particular, whether there will be enough demand from big corporate customers to make the project a commercial success.

Even SBS, operating in the huge U.S. market, has concluded that big business customers alone will not provide adequate revenues initially. It has adapted its plans accordingly and also proposes to offer lower-cost switched telephone services via satellite. But if British Telecom were to do the same, it would be competing with its own land-based communications network.

France plans to introduce a similar business communications service, using its Telecom 1 satellite, in 1983. In addition, British Aerospace and the French Matra electronics and missiles group have set up a joint company, Satcom International, to bid for international communications satellite contracts.

Direct broadcasting via satellite is also attracting a good deal of attention. In the U.S., Comsat has asked for Federal permission to provide a television service from coast to coast, and in Europe some half-a-dozen projects are in development or under consideration.

The dish aerials used for direct broadcasting are considerably cheaper than those needed for business communications, and also require much less precise alignment. It has been estimated that once in volume production they might sell for as litle as £50 each.

Leapfrogging

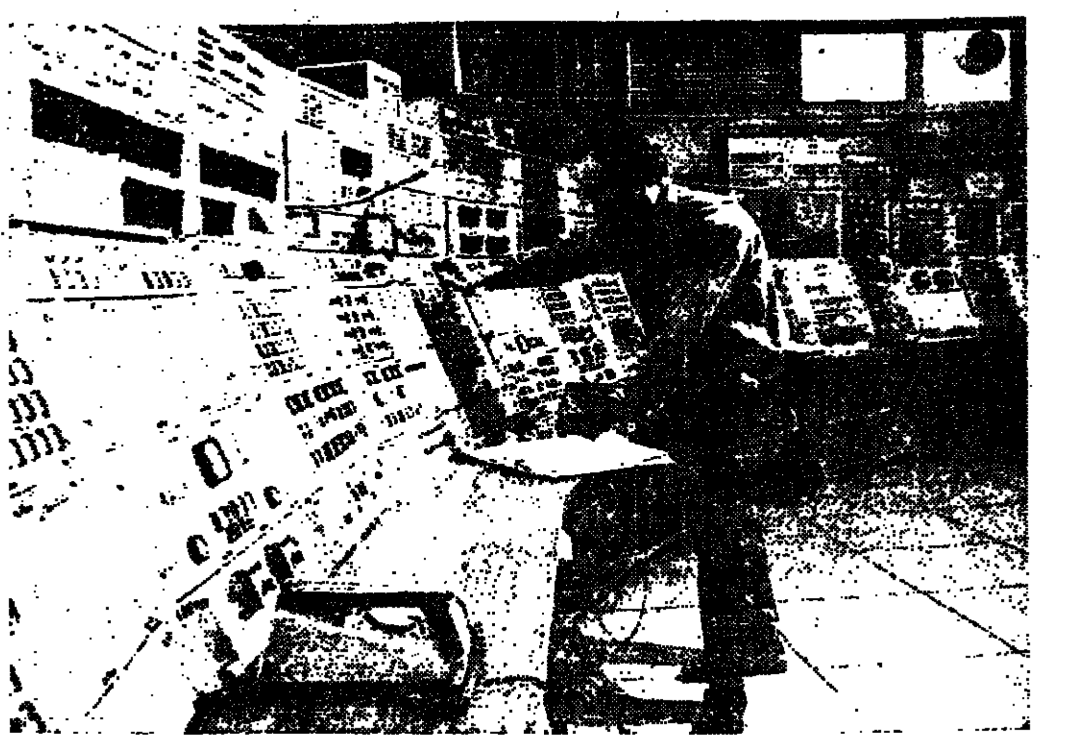
But like communications satellites, direct broadcasting makes it possible to leapfrog the extensive infrastructure of ground-based transmission equipment hitherto required for television services. France, for instance, has more than 100 transmitters and some 2,000 relay stations for each television channel.

Direct broadcasting is expected to be a boon to many poorer Third World countries, which have been prevented by high costs from offering nationwide television services until now. In Europe, it will also increase the volume of across-frontier broadcasting by national broadcasting authorities and open up new opportunities for private companies.

But advances in communications technology are rarely free from political complications. A hint of what may be in store has been provided by the recent controversy in West Germany over plans by West German publishers to launch three television channels using a satellite belonging to Radio Luxembourg.

The venture has caused a furore in the ruling Social Democratic Party, which objects that it will increase the amount of television advertising beyond reasonable limits and lower broadcasting standards. Chancellor Helmut Schmidt has hinted that the service might encounter difficulty in obtaining official authority to use the necessary broadcasting frequencies.

But pressures are growing, nonetheless, for the expansion of direct broadcasting. A Swiss-based consortium has been formed to broadcast television programmes in German, English and French, and one of Germany's main television networks is involved in a joint venture with France due to begin operating in the mid-1980s. By the end of the century, it is estimated, there could be as many as 60 satellites in orbit, providing hundreds of television channels to viewers all over the world.



The main control console for the three aerials at the Post Office satellite communication earth station at Goonhilly Down, Cornwall

Prestel switches emphasis to business users

VIEWDATA

GUY DE JONQUIERES

Hugh Routledge

As part of a deal worth nearly £2m to Granada TV Rental, Sealink subsidises travel agents who rent Prestel equipment from Granada. Here, a set is in use at Frames travel agency in Albemarle Street, London

ONCE UPON a time, an engineer at the British Post Office's research laboratories had a dream of producing an ultra-simple system that would allow almost anyone to communicate with a computer. It would be inexpensive, require minimum computer power and, above all, would be extremely easy to use.

The time was 10 years ago and the engineer was called Sam Fedida. His invention, ingeniously assembled from proven technology, was viewdata. That, at least, is its name in Britain. In most other countries, it is known as videotex.

The best-known example of the system is Prestel, the public viewdata service which the Post Office has operated commercially since early 1979. The service can store on central computers more than 200,000 "pages" of textual and graphic information, available to subscribers at the push of a button.

A subscriber buys or rents a television set fitted with a key-pad or keyboard and special microchips to unscramble the viewdata signal. He communicates with the computer across an ordinary telephone line. By installing a network of regional computers, each storing identical information, the Post Office has brought about two-thirds of telephone subscribers within local call distance of the service.

The Post Office originally envisaged viewdata as a popular mass-medium for communicating information. It focused its initial sales effort squarely at the residential market, hoping to achieve through private sales the volume needed to bring down the unit costs of Prestel receivers.

Ill-founded

Its optimism was ill-founded. Instead of the 50,000 sets which it had expected to be in service by the end of last year, only about 10,000 have been installed—most of them in offices. Though supplies of microchips, of which there was an acute shortage two years ago, have improved, set prices remain high. A Prestel receiver can cost as much as £400 more than a conventional television, and rents for almost twice as much.

During the past year, the Post Office has quietly adjusted its strategy. Recognising that a mass market was unlikely to develop in the short term, it has concentrated on marketing Prestel as a specialised information service for business users.

Results so far have been mildly encouraging. Travel agents, an early target of the revised marketing campaign, now account for more than a quarter of Prestel subscribers. They can use the service to look up travel timetables and to check on the availability and prices of package tours though not, at present, to make confirmed reservations.

But in spite of the substantial investment—well over £20m—which the Post Office has ploughed into Prestel, it seems less well positioned to reap commercial benefits from viewdata than do manufacturers and users of private systems. Learning from the Post Office's early mistakes, the private sector is at present focusing almost exclusively on the business market.

So far, roughly a dozen companies have announced private viewdata systems, ranging in price from about £17,000 to more than £100,000. They include the General Electric Company, Honeywell-Incoterm, Redifon, ICL, Jasmin and Aregon, a National Enterprise Board subsidiary set up to market viewdata overseas.

The number of companies making viewdata sets is even bigger. More than 70 types of receiver and adaptor are now on offer from some 40 manufacturers. Because they are being marketed primarily as terminals to be installed in offices, many of these sets are not designed to receive normal television broadcasts. This permits a more compact size and lower cost.

Broadly speaking, there are two categories of viewdata system. The more sophisticated and expensive provide the normal features of viewdata but also allow a user to "see through" the system into one or more mainframe computers. An example of this category is "Bulletin," recently announced by ICL.

Thomson Holidays is conducting a trial scheme, using a Redifon viewdata system linked to its IBM mainframe computers. The system enables independent travel agents around the country to dial up the Thomson database, check on travel and tour schedules and make a confirmed reservation.

Mullard, the electronic component and tube manufacturer owned by the Dutch Philips group, is installing a viewdata system that will enable its customers to check on the progress of their orders. BL plans to provide 2,000 of its dealers with simple terminals so that they can check on the availability of different models of car.

Versatile

The second category of system uses a single computer and is designed to serve a smaller number of terminals within the same office or organisation. Though less powerful, it is nonetheless versatile and is suited for storing business information like sales or accounts and for communicating messages between terminals.

A number of companies are planning to instal such systems to distribute staff information in offices or factories. Another application is to provide advice on health and safety. Instead of having to hunt for printed booklets telling them what to do in an emergency at work, employees have only to go to their nearest terminal, punch a few keys and obtain instructions on how to administer medical aid, un-jam a machine, or douse a fire.

As an "interactive" system, which allows the user to feed in information as well as retrieve it, viewdata is ideally suited for functions like electronic mail. But it is technically easier to perform such tasks on a system based on one computer — whether or not it is designed to "see through" to a bigger machine — than on a networked service like Prestel.

Arguably, the Post Office committed a marketing error in putting so much effort into networking the service, in an attempt to extend it to as large a national audience as possible. It should perhaps have concentrated instead on developing the range of facilities available on Prestel, even if this meant limiting local-call service to a smaller geographical area.

A major disadvantage for Prestel has been its inability to handle two-way transactions in "real time." That has meant that a subscriber who wanted to communicate directly with a supplier of data-base information — say, a travel company — could not do so instantaneously through the system. He could only leave a message at the central computer, to be picked up by the travel company when it next happened to check its electronic "mail box."

Private viewdata systems, by contrast, do permit real time communications, giving them a lead over Prestel in applications like air travel reservations, electronic mail and electronic banking.

The greater versatility and flexibility of private systems clearly pose a commercial threat to Prestel's attempts to build up a market among business users. There is a distinct risk that as soon as Prestel has begun to exploit successfully a new sector of the market, private competitors will move in and poach its customers.

Faced with this possibility, the Post Office has decided on a further, radical, change in its strategy for Prestel. It has announced that, from early next year, the service will be adapted to link up with data-bases at present outside the system.

This facility, known as "Gateway," has been borrowed from Bildschirmtext, the West German trial viewdata service which is based on Prestel technology. By expanding vastly the amount of computer power available to subscribers, it opens up opportunities to provide not only much greater amounts of information but also many new types of service.

"Gateway" will, for example, enable banks to offer their customers the possibility of checking their accounts, calculating interest payments and arranging transfers by punching instructions into Prestel terminals. The system will also be suitable for arranging insurance policies, electronic shopping and a variety of other applications.

The speed with which such services develop will depend on the response of the private sector companies which will be the main suppliers of them. But with the application of some imagination and entrepreneurial talent, the potential of Prestel as a cheap, popular and versatile communications medium for both business and private users may at last start to be realised.

A way to increase a company's efficiency and cut costs

MOBILE RADIO

LISA WOOD

ONE OF the only areas of real growth in the UK market during the last year for manufacturers of mobile communications has been the business user.

For while public service users have been looking very carefully at replacement of existing equipment, the businessman has seen investment in mobiles as a method of increasing efficiency and cutting costs.

Increasingly, the major manufacturers are directing much of their promotional literature towards this sector of the market and in particular the small business user.

Storno, 75 per cent of which is owned by General Electric of the US, said that the slack in public sector demand had to a degree been taken up by industry. Traditionally the majority of its sales in the UK have been to the public sector. Today the percentages are about even.

Much of the interest, by smaller operators, has been in Storno's Commtak system. Here, high-powered repeater stations throughout the country can be shared by users. Radio-telephone users rent the use of the repeater stations with rates depending on the size of individual operators.

On any one repeater about 25 customers can be accommodated with an optimum number of six to 10 units per customer. If a customer wanted to expand the number of mobiles it may then be suggested by Storno that he invest in his own system. It is estimated that the market for car telephones is expanding at the rate of about 15 per cent per annum.

Recently, Storno has been developing the Stornophone 900 for the London automatic radiophone service which is expected to be operational by the end of this year. This service is being developed by British Telecom whose three recommended suppliers of radio telephones are Storno, Pye and Marconi.

Waiting list

At present, British Telecom operates its Radio Phone System manually, by using telephone operators. The system is available in London and the major conurbations. Similar radio-telephone services are provided by Air Call, Securicor and Network Communications.

However, some two years ago, maximum capacity of Post Office customers was reached and a waiting list of new subscribers was started. This is now estimated to be some 2,500 potential customers. Because British Telecom is still waiting, after the World Administrative Radio Conference (WARC), for additional spectrum to be allocated by the Home Office, it has had to devise a method of getting more capacity out of the existing spectrum.

This has resulted in a change in spacing on the spectrum—a programme which is currently under way. The 55 channels used by British Telecom have traditionally been spaced at 25 KHz intervals. Now this is going down to 12½ KHz spacing.

At the same time, British Telecom has been developing its automatic system. It is hoped that when this is operational, existing customers on the manual system may convert to the automatic system thus making channels available for waiting list customers. It is hoped that System 4, as the automatic system will be called, will initially accommodate some 1,500 customers.

At first, System 4 will only be available in London, although sufficient equipment will be installed in the provinces to provide roaming facilities for London customers.

Much criticism has been directed at British Telecom—both by customers on the waiting list and manufacturers who are developing equipment for System 4—at an 18 months delay in introducing the system. This however has been mainly because of technical problems being experienced by Tekade of Germany, part of the Philips Group, which is developing the base system.

However, manufacturers have applauded the development by British Telecom of a standard code for radio-paging called POCSAG (Code Standardisation Advisory Group). The most notable features of the code are:

- A capacity for over 2m users
- Each user has up to four types of alerting signal
- Ability to convey messages, for example the telephone number of the caller
- A paging rate of up to 15 calls/second
- Capability of being transmitted either simultanously or sequentially from multiple transmitters.

Mr. Alan Wilkinson, marketing manager of Post Office Telecommunications, said: "By creating a standard code, more countries may adopt it, therefore encouraging volume production of pagers, which could bring costs down."

British Telecom — despite severe competition from organisations such as Air Call—is one of the major suppliers of personal paging equipment in this country. It supplies equipment manufacturerd by Multi-tone, Motorola, General Electric and STC. It is currently looking at new tenders for its contracts, all the equipment now having to comply with POCSAG.

Currently, its paging system is operational in London and seven provincial centres, but the service is to become available shortly throughout the country. This is because of the development, by the Post Office itself, of an integrated terminal which will replace Motorola's Metro 100 terminal. Five new paging computers will have a capacity for more than 1m customers.

Answering service

British Telecom's service at present only offers a "bleep," while that of Air Call includes tone plus message (via a bureau). However, British Telecom is examining the possibilities of an answering service in a proposed joint venture with Nexos, the office automation subsidiary of the National Enterprise Board.

This has provoked strong criticism from Air Call — which is Britain's largest operator of car telephones, paging and answering services. Air Call says that British Telecom will be able to get "type approval" for the Nexos-supplied computer before it loses its monopoly, when the British Telecommunications Bill is passed.

Rival answering services, said Air Call, may have to wait for years to get approval for similar equipment from the new independent standard setting and approval bodies set up when the Bill is passed.

Electronic revolution makes broadcasters nervous

BROADCASTING

ARTHUR SANDLES

IF THERE is one sector of the audio visual business worldwide which is nervous about the coming decade in broadcasting it is the traditional broadcasters themselves. Almost everywhere one looks the major league broadcasting organisations see themselves under threat.

The recession has hit advertising. State assaults on public spending have hit the funding of such organisations as Britain's BBC and the PBS in the U.S., video discs and cassettes are nibbling at viewing time and the clouds of cable and satellite services hover on the electronic horizon. The cosy world of licensed broadcasting services carefully regulated by central government is under assult.

The tidal wave of broadcast innovation threatens above all the people who until now have dominated broadcasting itself.

Any assessor of the present circumstances has to take into account a variety of factors which will influence the pace of change. Initially it is easy to be overwhelmed by the awe-inspiring nature of the potential of electronic innovation. Looking at that potential alone can give the impression that the new techniques will sweep aside conventional broadcast methods.

Flexible

That, however, is to discount the flexibility of the broadcasters, the eagerness of governments to preserve the current establishment and the sheer capital costs of major change. Potential is one thing, the actuality is quite another.

Universally, the backbone of broadcasting today is still the studio production of live or pre-recorded material, whether it be for radio or television reception, which is then transmitted by wireless techniques to domestic receivers each equipped with their own aerial. Such transmissions ("off-air broadcasting") use radio bands, of which there is only a limited supply, and these bands are rationed first by international agreement and subsequently by individual government licensing systems.

The threat to this system stems from the facts that (a) cable is potentially an effectively unlimited multi-channel service under which the rationale for rationing disappears, (b) satellites beam to areas much larger than normal state boundaries, and (c) pre-recorded material can be bought at retail outlets and played back whenever the consumer chooses.

These factors put broadcasting in the 80s and 90s in much the same theoretical boat as publishing. No major nation in the world currently gives broadcasters the same freedom as book or newspaper publishers, with even the U.S. imposing regulation via the Federal Communications Commission and the Italians fighting a sometimes losing war against broadcast piracy. The arguments against similar freedoms for television and radio as now exist for book publishing and the cinema are, however, rapidly diminishing.

Most governments appear to accept the basic theory that total freedom of broadcast communication would be bad for their populations. The British approach to cable television systems and citizens band radio is a classic example. If, it is argued, total freedom were to be allowed, the quality of off-air public broadcasting would be diminished and the television system in particular opened to fringe political movements and, worst of all, pornography.

The example of the U.S., where urban cable systems are able to buy major films and rights to sporting events, thus robbing rural viewers of the ability to see such offerings, and of Italy where housewives make pin-money by stripping for local television channels, are offered as evidence of the evils which can arise when even a degree of freedom is granted.

The theme of broadcasting in the 80s and 90s is likely therefore to be one of continued technological innovation and a continued struggle by various authorities to regulate it.

It is upon the extent that this regulation can be maintained that the fortunes of the traditional broadcasters depend. In some fields, notably video cassettes and discs, regulation has not even been attempted. In others, such as direct satellite transmissions, the transnational nature of the development makes domestic control extremely difficult and governments will have to rely upon international co-operation, but the situation in short- and medium-wave radio-frequency co-operation at the moment offers little hint of optimism.

Where regulation can be imposed is in the fields of cable, television, and recent British corsetting of cable television experiments are an example of how strict the controls can be, and in further developments in off-air systems. Given a continuance of that regulation and thus the protection of the present broadcasting structure, the prospects for the broadcasting establishment suddenly look a great deal brighter.

It is perhaps too easy, however, to think in terms of the armies of new technology either sweeping though the ranks of traditionalist, or of being pushed back by televisual Luddites. In fact the problems of the next two decades are likely to be caused by the marginal effects of innovation.

Once an average family is armed with a video-disc system, a cable television supply and its normal off-air services, clearly the total viewing of any one service is likely to go down. Thus, unless the alternative services are extremely poor and the traditional offerings are remarkably good, the ratings might be expected to decline somewhat. There has been some evidence for this in the U.S., a factor which provoked a sizeable response from the network companies in the form of a more popularised format.

The impact of rival services has already been seen in radio. Radio in the 30s and 40s was very similar to television today—packaged magazine style. The coming of television helped to fragment radio in many countries into a series of specialised channels each catering to specific tastes.

The availability of rival services could quite easily send television down the same path. The thought of an all-quiz station might make the BBC and the Independent Broadcasting Authority wince, but the idea of an all-pop Radio One would scarcely have delighted Lord Reith.

Restlessness

The move to specialisation is produced by both consumer demand and advertiser restlessness. If ratings overall start to decline then a public service organisation such as the BBC must be able to plead that it still satisfies specific sectors of the market; in the case of commercial channels it must be able to claim delivery of particular market segments (the best example of the latter is the day-time soap operas in the U.S. which deliver huge numbers of middle-aged, middle class, high-spending housewives). Another outcome would be a multiplicity of domestic TV sets again repeating the radio pattern.

Such pressure will put the present concept of off-air broadcasting in Britain under considerable strain. The BBC, if it can maintain its licence revenue, is probably better placed than independent television to respond, which it can do simply by extending its development of BBC 2 into a system more akin to its four channel radio services (now under review). For the IBA, such a move would strike at the very basis of the system.

But what of the people who will be coming into broadcasting and so creating these pressures? As with all innovation, the rewards may be enormous in potential, but the obstacles, particularly those of finance, are vast. Simply to send up a broadcast satellite and provide the necessary ground support is likely to involve a bill approaching £100m.

To this must be added consumer investment in receiving equipment, investment which has to be encouraged by the temptation of programming which will be expensive to provide. This therefore is likely to be a field to attract the large corporation or national Government. The young entrepreneur with nothing in his pocket but a number of good ideas in his mind is not likely to make much headway.

Such a person has more of a future in cable television, where relatively small communities can be offered benefits from a cable service, provided the regulations are not over-burdensome. Given a large degree of freedom the growth of cable systems in Europe could be equally as impressive as they have been in the U.S.

The capacity for the home viewer to watch not only his national network television services and local television stations, but also channels of other nations (a London-New York swap for example) and other cities, is with us already. The use of video recording and play-back equipment is spreading fast. Satellite plans are being laid. Cable television's tentacles are reaching out around the world. It is going to be an intriguing, and somewhat intimidating, decade.

Government's choice of frequencies pleases no-one

CITIZENS BAND

ELAINE WILLIAMS

RUMBLINGS of discontent can still be heard following the Government's decision in February to legalise Citizen's Band radio later this year.

Few pressure groups, both for and against the introduction of a two-way personal radio system in the UK, are happy with the Government's choice of frequencies. Instead of opting for a single frequency there will be two; one at 27MHz FM with a range of about 15 miles, the other a much higher frequency of 928 MHz, with a range of between one and eight miles, depending on conditions.

Neither of these frequencies, it is claimed, will provide a suitable CB radio system and, worst of all, the Government has denied British industry the chance of competing in a market which could be worth as much as £50m, Government critics claim.

The Government has bowed to pressure of the illegal numbers of CB users on the 27MHz AM—amplitude modulation—frequency band—estimated to be more than 250,000 in the UK. They use sets illegally imported from the U.S. and Japan—often smuggled into Britain via Northern Ireland.

Cheap sets transmitting on the 27 MHz AM frequency started coming into the UK in 1978 when the mid-1970s market for CB radios collapsed in the U.S., leaving manufacturers with many unsold sets.

In the UK the initial market for CB is expected to be between 1m and 2m sets a year once the service is introduced in the autumn. The boom is expected to last about two years before the U.S. pattern is repeated and sales fall sharply.

Last year some CB pressure groups declared "open war" on the Government despite the threat of a hefty fine and confiscation of their equipment. But even the advocates of 27 MHz are unhappy because the Government has opted for FM—frequency modulation—rather than AM transmission.

Interference

The Government's decision to choose the FM method of transmitting the radio signal was to cut down interference to television sets and to the existing users of 27 MHz. These include hospitals (for radio pagers) and users of radio controlled models.

Unfortunately, many of the illegal users say that they will not abandon their old AM sets when the CB service is legalised and the Home Office will have the almost impossible task of trying to differentiate between illegal AM and legal FM sets. Already it has been overwhelmed by the number of CB users and does not have the resources to cope.

Citizen's Band radio is quite simply a personal radio system. With a transmitter installed in the home or car it is possible to hold a two way conversation just as with a telephone.

Where CB already operates, it is used for accident and emergency communications, drivers warn each other of traffic jams, businessmen use it for keeping in contact with home, the housebound use it for purely social purposes and sometimes it is even used for making abusive calls.

The National Committee for the Legalisation of Citizen's Band Radio, a pressure group set up early last year to campaign for an early introduction of CB, warned the Government that failure to listen to the CB lobby would result in the adoption of an unsuitable frequency—27 MHz.

It asked the Government to consider a frequency of 41 MHz, used at present to transmit the old BBC black and white television standard which is to be phased out from 1982.

The committee argued that such a frequency would cause little interference but would allow British companies to make sets free from competition by Japanese and U.S. manufacturers. This frequency was also supported by the Citizen's Band Association which said that five different frequency bands were being used to transmit the black and white television standard.

The association said at the time: "All we are asking of the Government is to close down only one of these five channels." But the Government ruled out 41 MHz on the grounds that "it would be several years before any other service could be located there."

Other frequencies suitable for CB service were also canvassed at 225 MHz and 450 MHz. Mobile radio equipment is already in use working around these bands and many British companies have experience in manufacture.

However, the number of illegal users on 27 MHz has swelled to an estimated 250,000 and the National Committee for the Legalisation of Citizen's Band Radio claimed that the number was increasing by about 16 per cent a month.

Home Office officials were unable to curb the growing use of illegal sets and the Post Office interference division members complained that they had received personal abuse and threats because of their work in detecting illegal CB users.

When the possibility of CB was first suggested, several British companies declared a tentative interest in marketing Citizens Band radio. These included GEC, Philips, Fidelity Radio, Ambit and Voxon.

Low cost

However, any company new entering the UK market is likely to opt for importing from the far east or the U.S. because of the low cost of such sets. It is estimated that a good quality FM set from Japan could cost about £32 landed in the UK—and would retail for less than £60.

The radio equipment manufacturers have expressed their disappointment at the Government's decision to opt for the 27 MHz FM band in addition to the 928 MHz already designated for Citizen's Band radio. Despite suggestions by the Government that the choices of frequency will give British companies the chance of competing in the market, the industry is unlikely to make any equipment.

Equipment for the higher frequency will be far too expensive for the consumer—costing up to £500 a set compared with around £50 for the 27 MH. At such a price, companies say there is little incentive to throw away the illegal sets. In addition, the 928 MHz sets have a far shorter range of reception, which some opponents claim will make them useless in city areas.

Originally, proponents of CB radio claimed that the Government had suggested 928 MHz as a way of delaying the introduction of a service. They were following France which had originally recommended a frequency in the 900 MHz range, but later withdrew the suggestion through lack of support.

In France the 27 MHz FM system, now a European standard for CB, was adopted late last year. But this has not prevented the continued use of the banned AM sets which have a far greater power and range.

Some CB users, both in the UK and overseas, have become bored even with the range of the AM sets and have been buying amplifiers to boost the range. Some CB transmissions from the U.S. have been picked up in the UK.

The debate over CB radio is likely to continue for several months as the extent of the problem of interference becomes known.

Packet switching cuts cost of long distance messages

EXTERNAL NETWORKS

ALAN CANE

EARLIER this month, British Telecom announced a new service. Futuristic in concept, it will be one of the most advanced methods of telecommunications developed and point the way to the cheap and effective movement of voice, data and image over very long distances.

The service is a form of electronic mail, where documents typed on special terminals will be transmitted to their recipients at rates of up to 3,500 words a minute.

By comparison, conventional telex, itself a perfectly respectable form of electronic mail, transmits at only 80 words a minute.

The technology British Telecom is using for its mail service is called "packet switching." It is one of the more important developments in data communications over the past few years. It makes possible efficient use of very capital intensive data networks.

According to the Eurodata Foundation, which collects and publishes statistics on data communication, the demand for data services from the PTTs is likely to grow fourfold up to 1987.

One measure of data communications usage is the number of points at which a network, in this case the public switched telephone network, is linked to a device generating a digital signal—a computer or a computer terminal. Because voice grade telephone circuits carry signals in analogue rather than digital form, a device called a modem must be interposed between the terminal and the network to convert the digital signal into analogue form.

There were 393,000 such points in Western Europe in 1979 and the number is likely to rise to 1.62m by 1987.

The number of terminals will rise even more dramatically, from 625,000 in 1979 to 3.96m in 1987, according to Eurodata's figures, suggesting an increased use of multiplexing techniques to attach more than one terminal to each network entry point.

Effective

Multiplexing is one of the most effective techniques for squeezing all possible capacity out of a telephone circuit. It simply means transmitting a number of separate information streams down the same telephone line in such a manner that they do not interfere with each other.

In the older technology frequency division multiplexing, each information stream is assigned its own frequency range and the receiving station contains demodulating devices each looking for its own particular frequencies.

Time division multiplexing, ideally suited to digital transmission, involves interleaving several streams of data—only the synchronisation of the sending and receiving terminal makes it possible to unscramble the composite signal on arrival.

It is possible to multiplex voice transmissions in a similar way using the fractional dead times on the line in one conversation to interleave other voices.

The latest development is the intelligent or statistical multiplexer which can take advantage of dead time on a number of data channels to push data through as compactly as possible.

What is interesting about British Telecom's message service is not the new facility—many large businesses, especially banks, have been running message switching operations for years based on minicomputers — but the fact that it will use, when it gets under way, BT's packet switched network.

As the Experimental Packet Switching Service (EPSS), this has been running for four years. It was set up in 1977 with packet switching exchanges in London, Manchester and Glasgow and was reasonably successful.

But what is packet switching, and why is it of such importance?

In a conventional circuit switching network, such as a voice grade telephone network, when a call is initiated, contact is established between the caller and the recipient and this is maintained for the full duration of the call. This is inefficient because of the high proportion of time the line is simply "dead"; neither party is saying anything. It is also costly; the caller is paying for the full connect time.

In a packet switched data network, the data for transmission is broken up into a series of discrete blocks or "packets" each of a maximum size.

Each packet is made to an agreed format by an essential device called a PAD (packet assembled/disassembler) consisting of a header with information such as the network address of the terminal for which the packet is destined, a section of data and a tail section comprising all the checks necessary to ensure the package is in good shape.

All the packets are delivered to the same, correct, address but they may follow any route through the network to get there.

The network itself is responsible for ensuring the package gets to its destination by the best possible route, avoiding delays and faulty parts of the system. The cost of the call is dependent on the connect time, not the distance.

DATA NETWORKS
(Date when First Available)

	Circuit Switched	Packet Switched
Austria	1980	1984
Belgium	1983	1982
Denmark	1981	1984
Finland	1981	1983
France	1973	1980
German FR	1976	1982
Greece	1984	1984
Ireland	1984	1983
Italy	1984	1984
Luxembourg	—	1982
Netherlands	1986	1981
Norway	1981	1984
Portugal	—	1983
Spain	1986	1972
Sweden	1981	1981
Switzerland	1981	1983
UK	—	1982
USA	1972	1975

Source: Eurodata 1979.

The catalyst for packet switching development in Europe has undoubtedly been Euronet, a system linking the EEC countries and designed to provide access to the large Community data bases in science and medicine.

Access to the important banks of information had developed on an *ad hoc* basis and the Commission discovered that a single, on-line information network would cost only one-sixth the price of several independent networks each operated by the database suppliers.

The national networks — some 16 countries have already announced plans to introduce pocket switched services — are designed to interconnect, providing eventually an international European public packet switching network.

The UK service already has access to the Telenet service in the U.S. through its IPSS. Links with Canada have been established through the Teleglobe international gateway giving UK subscribers access to Canadian national networks.

But in addition to the stimulus provided by Euronet, economics is a prime driving force in the move to packet switching. The tariff structures are designed to be particularly attractive to a large section of data communications users, especially those who want to move large volumes of data a very long way.

Fear of cut in post revenue

ELECTRONIC MAIL

JASON CRISP

HIGHLY labour-intensive postal administrations around the world are becoming increasingly nervous about the prospects of electronic mail which may dent a significant proportion of their revenues. Their response has been to look at ways of offering electronic mail services themselves, but it is still likely to have long-term effects on their staffing levels.

A number of large companies are looking to electronic mail to speed up internal communication which can account for the largest part of their total communication.

A substantial part of a postal authority's business is unlikely to be affected by the advent of electronic mail. The deliveries of parcels, personal letters, magazines and advertising, for instance, would probably not be affected.

But a crucial and profitable sector of business communication could have a serious effect on revenues within five years, according to one commentator. With high fixed costs, mostly labour, the profitability of a postal administration is dependent on being able to sustain its volume of business.

Last summer Intelpost, the first international electronic mail service available to the public, was opened between Toronto and London. The first link was to have been between the U.S. and London because it was largely the initiative of the U.S. postal authority and the British Post Office. However, regulatory problems in the U.S. hindered this link.

But Intelpost extended its links to the U.S. early this year. The U.S. had become concerned at the widespread interest from other postal administrations, including Latin America and the Middle East. Not wanting to be left behind it found a way round its regulatory problems by joining Intelpost via a link with Toronto.

A document sent from London is transmitted first to Toronto then retransmitted to New York.

Two systems

Several countries have been cautiously developing internal public electronic mail services. The German Bundespost has offered facsimile services in a number of post offices and a similar service has recently been started in the UK linking 15 cities.

There are two basic systems for sending electronic mail—text and facsimile. Intelpost uses a sophisticated facsimile system. A document is scanned very closely in narrow lines and the light and dark points on the document are converted into electronic signals which are sent along a telephone line to a similar machine which reproduces a copy of the original document, similar to a photocopy.

A text system is similar to telex. Each letter of the alphabet is given a short electronic code which can be described with a small number of pulses. The advantage of a text system is that it involves far less information being sent and is much quicker. The main disadvantage is that it cannot transmit diagrams, printed letter headings, or signatures.

There are several ways mail can be transmitted electronically. Communication can be on the telephone network, packet switched networks, the telex system or on private tied lines. This month British Telecom announced that it would introduce a teletex service (basically a form of super-telex) early next year which will be available on both the telephone network and packet switched data network.

Automatic

Companies would be likely to have a telephone line reserved for the teletex. Other countries introducing teletex services include Sweden, West Germany and Belgium. British Telecom's Teletex will link with those systems. Transmitting and receiving will be fully automatic and the system is capable of sending up to 3,500 words a minute, which compares with 80 words a minute for telex.

The main growth in electronic mail is likely to remain in large companies for internal use. The rapid expansion in word processors offers a potential route for companies to introduce an electronic mail system.

Teletex terminals and communicating word processors are expected to account for the largest initial growth in electronic mail terminals. Combined text and graphics terminals still at an early stage of development, are likely to be widely used towards the end of the decade.

Estimates of how much postal traffic will be transmitted electronically vary, but even conservative predictions say that by 1990 at least 10 per cent of business mail will be electronic.

Sceptics point out that facsimile equipment has never become widely accepted in spite of many heady predictions. Also, the number of installed telex machines is relatively small. However, facsimile has been either expensive or inconvenient and slow to use, usually without any capability for store and forward. It has been used only where it was essential and there is a high volume of traffic.

Telex, the established form of electronic mail, is very slow, limited to upper case text of a poor print quality, and few countries offer a store and forward capability.

But the growth in data terminals and word processors will begin to make intercommunication increasingly attractive, although the problem of a proliferation of incompatable products remains.

The expansion of teletex is likely to be the key to electronic mail systems if they are to become used for communications between companies rather than just internally.

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Technology demands more sophisticated exchanges

INTERNAL COMMUNICATIONS

JASON CRISP

THE SWIFT evolution of communications technology has thrown up a wide number of complex questions on how companies should establish their internal communication networks and systems. The convergence of telecommunication and computer technology offers the temptation of bringing together communications into one system.

Every company has its own telephone system based, in most cases, on outdated technology. Many will have separate data networks varying greatly in size and capability according to need.

The rapid growth expected in office automation equipment inevitably will require extensive communication networks. But for most companies the first question is getting a more sophisticated PABX (private automatic branch exchange) mainly for handling voice traffic.

In the UK the PABX market has been divided in two. Any exchange with over 100 lines can be supplied by a number of companies, providing they have Post Office approval. IBM, the U.S. computer giant, was the first company to be allowed to supply a large electronic exchange and initially was able to maintain it as well, although after a short time the Post Office insisted on doing the maintenance itself. A number of other companies offer large electronic exchanges including ITT, Philips, Plessey and GEC.

Short supply

The Post Office has kept its monopoly to supply equipment for under 100 lines. Until last November the only exchanges it offered were based on electro-mechanical technology and were in short supply in certain areas. (An expanding London-based minicomputer company last year opened its offices with a fully automated office system which included message systems, word processing, information systems, and billing and accounts records. Every employee had an automated work station. All the Post Office could provide for a switchboard was an ancient plug-in manual exchange.)

British Telecom, as the Post Office's telecommunications side is now called, has recently introduced three electronic exchanges. The Monarch, which was developed by its research laboratory at Martlesham, Suffolk, is a fully digital PABX with stored programme control. It can have up to 120 lines and can easily be used to switch data as well as voice. The manufacturers are GEC and Plessey who were also responsible for developing its production. Orders total over £45m.

A smaller PABX developed by TMC, a subsidiary of Philips, the Dutch electronics group, is being offered by British Telecom, which is also buying a small and relatively cheap analogue electronic PABX from Mitel, a rapidly growing Canadian company.

Mitel was founded in 1973 by two British-born engineers and has been extraordinarily successful. It began by manufacturing specialist telecommunications equipment which it supplied to other manufacturers.

Under fire

The company introduced its first PABX, with up to 180 extensions, in 1978. Its sales have mushroomed and a recent U.S. survey estimated that it might have 3 to 5 per cent of the PABX market. It has introduced a number of other products including a PABX little bigger than a brief-case with up to 16 extensions.

The British Telecommunications Bill, currently going through Parliament, came under widespread criticism from manufacturers because although it opened up the opportunity to provide all sizes of PABX to companies, the monopoly on maintenance would be left with British Telecom.

The manufacturers argued that this would leave British Telecom with a restrictively tight hold on the market because it would have effective control of the cost of ownership of an exchange. After lengthy lobbying from the time the Bill was first published, the Government recently changed its mind and will allow manufacturers to maintain newly installed electronic PABXs.

The manufacturers believed that the biggest objection to the lifting of the maintenance lobby came from the Post Office Engineering Union which feared that it might lose jobs if maintenance was undertaken by private contractors.

British Telecom's argument, however, rested on the point that the PABX was effectively part of the total network which was why it should retain maintenance to protect the network's integrity.

Most modern PABXs with computer controls (stored programme control) are still analogue-based even though they offer a number of sophisticated facilities. However, the new generation—like British Telecom's Monarch—are fully digital.

Electronic PABXs features include abbreviated dialling where regularly-called long numbers can be reached by pressing two or three buttons, repeat dialling of the last exchange number called and a facility known as "camp on," which calls back when an engaged number becomes free and connects both phones.

Someone moving about an office can have their calls follow them by transferring them automatically from one extension to the next.

Most electronic PABXs offer limitations on the calls which can be made from an extension such as prevention of long-distance or overseas calls. The other major feature is a detailed reporting system which can give a breakdown of the numbers an extension has been calling and for how long.

Concern

The use of digital switching in a PABX can enable it to be used as the communications centre for whole range of "office of the future" products including facsimile, communicating word processors and data transmission between the computers.

There was some concern among British companies that the proposed continuation of maintenance monopoly might deter companies from any integration of data and information networks with telecommunications.

However, a number of office equipment manufacturers which are at least as keen as traditional telecommunications companies on the growing office communication market are developing systems separate from the PABX and derived from data networks.

Optical fibres a vital step

TRANSMISSION EQUIPMENT

JASON CRISP

ONE OF the more contentious parts of the proposed relaxation of the British telecommunications monopoly held by the Post Office would allow competition with the basic network itself. The objection, forcibly made by British Telecom, the telecommunications side of the Post Office, is that a competing network would cream off its profits.

The problem facing anyone who does want to offer an alternative network is in quickly building up the physical transmission links to provide a competitive service. The Post Office has hundreds of thousands of miles of cable in the ground put in over a great many years.

Continuing improvements in microwave transmission means that, although still very difficult, it is possible to build trunk links between major centres. The biggest problem is that microwave links have to be within a line of sight of each other.

The greatest difficulty comes in the local distribution of a telecommunications network to individual buildings without digging up streets to put in cables. The problem may be solved with infra-red or laser links directly between buildings.

Second phase

Perhaps the most important step in transmission of telecommunications is in optical fibre. British Telecom is about to start on the second phase of its optical fibre programme and by the end of next year will have several hundred miles of optical fibre cable in use.

Any proposed alternative network would also be likely to use optical fibre cables on top of microwave and other broadcast transmission methods.

Although the basic principle by which optical fibre works was demonstrated over 100 years ago, it was not until the mid-1960s that it was shown to have an application in telecommunications.

Optical fibres are very thin strands of glass, about the thickness of a human hair, down which information can be sent with tiny pulses of light. Two strands can carry nearly 2,000 telephone conversations at the same time.

The possibility of using optical fibre for telecommunication was first demonstrated by two scientists working in Britain for Standard Telephones and Cables, a subsidiary of ITT. In 1970 the U.S. company Corning Glass announced it had developed a system of making optical fibre which had good transparency to allow the light to travel long distances and a low level of distortion.

The British Post Office was one of the first PTT's to show a strong interest in optical fibres. And in the early 1970s it commissioned a number of trials from the major UK manufacturers.

It has so far placed orders with UK manufacturers for 34 optical fibre systems operating on 15 routes. The first commercial optical cable came into operation last year between Walsall and Brownhills, a distance of just over five miles, installed by BICC and Plessey.

A longer cable between London and Reading was installed by GEC last year. Fairly substantial work on optical fibre installation is going on around the country, including links between Banbury, Reading and London and also out to Colchester. There are a number of routes from the north Wales town of Corris, but only short hops.

Seven experimental and demonstration optical fibre systems have been installed in the UK since 1977, four by the Post Office and one each by GEC, Plessey and STC.

Optical fibres have several advantages over conventional co-axial copper cable. They are very much smaller. Ten fibres in one cable, which could carry over 9,000 calls, would be less than half an inch in diameter—little more than a quarter the size of the comparable co-axial cable.

Attractive

The smallness of optical fibres is particularly attractive, as many cable carrying ducts in the ground are packed to capacity, especially in London. Another considerable advantage is the long distance between repeaters. A co-axial cable needs an electronic repeater to boost the signal about every 2 kilometres. Optical fibre can achieve 15-kilometre spacing, and this is being extended as the technology advances. Over many links, optical fibres will be able to travel from the exchange in one town to another without the need for a repeater.

Other advantages are a high immunity to electrical interference and little cross-talk between lines. The price of optical fibre is falling fairly rapidly, although it is dependent on getting the right economies of scale. This is a particular problem because the amount of fibre being used is relatively small—telecommunications is almost the sole user—and there is a danger of over-capacity.

BICC, the cable and construction group, has set up a joint venture company with Corning. It plans to manufacture fibre in the UK, installing a capacity of 100,000 kilometres a year. GEC may join the venture.

Problems

Standard Telephones and Cables is installing capacity to produce 25,000 kilometres a year. In its case the fibre is more sophisticated than that to be produced by Corning and BICC but less well proven.

Optical fibres still have a number of problems which need to be ironed out. It is difficult to put the fibres into cable so that when it is stretched and pulled round corners the transmission of the light inside is not affected. Another problem is joining these fibres.

Another unknown is how long fibre cables will last and how reliable the sensitive opto-electronic devices which transmit, boost and receive the light signals will prove to be. But by the 1990s optical fibre is likely to become widespread throughout the telecommunications network. It will even start to replace the local copper wire network and come into the home.

The advantages of digital transmission

SWITCHING EQUIPMENT

ALAN CANE

THE SHAPE of electronic communication today has been moulded more by economics than by technology. The telecommunications authorities, the PTTs world-wide, put a price on the services they are prepared to supply.

Because the global telephone network is so large and so complex — some have described it as the world's largest machine—those charges inevitably are high. The technologists, on behalf of the user, use their ingenuity to squeeze the last drop of value from those services.

If it was economic to connect everybody to everybody else by a single pair of wires, there would be no need for switching. If telephone lines were cheap and easily available, there would be no need to cram several telephone conversations, or several streams of business data, simultaneously on to one line.

But given the dictates of the real world, there are substantial advantages in a telecommunications system based on digital technology compared with the present, familiar analogue method of transmission.

Sophistication

None of this is new. The telex network has always worked with a form of digital technology. Indeed, the development of the telegraph system to transmit messages preceded the telephone system by some years.

What has changed is the sophistication and availability of cheap computer power and the development of clever methods to convert speech patterns into digital form.

The advantages of a digitally based telecommunications network lie both in the quality of the service the PTTs can provide and in the price the user has to pay for it.

*If the point that the tele*communications business turns on economics needs any reinforcement, Mr. J. S. Whyte, the deputy managing director of what was then simply described at the British Post Office (British Telecom had yet to appear on the scene) told a conference last year that 252 racks of conventional cross-bar switching equipment could be replaced by only 15 racks of its digital counterpart.

At the other end of the scale. Mitel, a young Canadian company, has launched two tiny microprocessor-based telephone exchanges cheap enough to be used in the home or very small office. The features these switching centres share with their larger counterparts include speed dialling and automatic redialling of the last number called.

Mitel is reported to be planning to add to the systems so they can control the lights and the locks. At this stage, the devices will have ceased to be true digital exchanges — they will be general-purpose home computers, able to deal with any system or device with which it can communicate digitally.

So what is digital telephony and why is it that all industrialised countries are planning to change to digital systems as soon as their economics make it feasible to do so?

Conventional telephone lines carry conversations in the form of changes in the magnitude of an electrical current. The pattern of the current changes is an analogue of the spoken words. In digital telephony, information is transmitted along the telephone line in the form of a coded series of pulses. By convention, the presence of an electrical pulse is equivalent to a "1"; the absence of a pulse to a "0."

The full beauty of digital telephony is that any form of information can be represented by patterns of 1s and 0s—voice data, images, colour. 1s and 0s, binary digits (bits) as they are known, are the *lingua franca* of electronic communication—and they are the working capital of the digital computer.

One way of looking at a computer is as a device for switching large numbers of streams of binary digits around at high speed according to a predetermined pattern.

A computer carries out its various tasks automatically by obeying a series of instructions already embedded in its memory. It may have options according to the information presented to it, but essentially it has to follow slavishly what its programmer has told it to do.

A digital exchange works on the same principle: it offers an infinitely broader range of ways of responding to an incoming call than was possible with electromechanical exchanges of the Strowger or Cross-bar variety.

System X, the British Telecom version of digital telephony, offers, for example, three-way calling, call waiting routines, automatic ring-back and network-wide malicious-call trace in a list of over 50 new facilities.

Since the instructions in the store are not permanent but held in the form of erasable electronic memories, it is easy to add to, delete or change the facilities the system offers. Even if it were economically possible to offer such facilities using an electromechanical form of switching, changing the facilities would be cumbersome and would probably mean taking the exchange out of action while the modifications were made.

Digital signals are inherently less susceptible to noise and distortion than analogue signals. After all, a particular bit can only be a zero or a one — and if the system is in doubt, the stored program can order the retransmission of the doubtful bit.

By comparison, if the current at any point in an analogue transmission is distorted, it is impossible to tell its original value without total retransmission.

But all speech starts out as an analogue signal — how is it converted into binary digits? *This depends on an important* piece of information theory which holds that to transmit the information in an analogue signal, it is not necessary to transmit the whole signals. It is enough to transmit a series of samples of the analogue signal.

Samples are taken at particular time intervals and the value of the electrical current at those points translated into binary code. This is called pulse code *modulation and it is the heart* of digital telephony.

It would obviously be best if both transmission of the signal and switching at the exchange were accomplished digitally. According to Mr. Whyte: "Our studies have shown that compared with a conventional analogue transmission switching network, an integrated digital network can reduce the whole life cost of ownership by 50 per cent — and this is a prize that would attract any administration."

This kind of integrated digital network is still some way off—*and the substantial investment* the PTTs have in conventional analogue equipment is at least partly to blame. Voice grade telephone circuits are not ideal for digital transmission, and conversion will take time and cost money.

Some of the advantages of digital telephony are already available to customers. Messages switching, perhaps the earliest form of electronic mail, exhibits one of the most useful *characteristics of a computer*-controlled communications system, store and forward.

There are statistics to show the amount of time wasted in an attempt to make a successful connection on the telex network. A message switch—basically a minicomputer linked either to the telex network or to another minicomputer over telephone lines, private or public—will store the message and send it forward to the receiving station when that falls free.

The speed with which the existing analogue system will be replaced by an integrated digital network should be regarded charily, at least in the UK. There are over 6,000 local exchanges and it will be decades before they are all replaced by digital exchanges. The first System X exchange is, however, already up and running in London.

But the network when fully up and running will be a multi-purpose vehicle for advanced services. Indeed, it is hard to see how the needs of the elec*tronic office, electronic funds* transfer and business data transmission could be met without an integrated digital telecommunications system.

An automatic facsimile transmission system, allowing up to 30 documents to be transmitted as a single batch has been introduced by ITT Business Systems. Here, an operator loads documents into a feeder prior to transmission.

Technologists aim to keep users happy

TERMINALS

ALAN CANE

MODERN communications has become a matter of talking to and through computer systems. If that sounds a little frightening to the layman, nervous of pressing the wrong switch on a golfball typewriter, there may be comfort in the fact that the technologists are aware of the psychological problem, and that they are doing their best to make systems from bank service tills to telephones as simple to use as possible.

"Transparent technology" and "user friendly" are the buzz words used to describe this approach to human as well as electronic engineering.

There are already systems you can talk to. Calma, a U.S. company which manufactures machines which enable de*signers to create drawings with* the help of a computer, is marketing a system in which the various commands—move, zoom and so on—can be spoken.

There are systems you can write to. In the UK, Quest, another company with a major interest in computer-aided design, pioneered the development of a simple pad—the Datapad—which could transmit written words to a computer.

Such is the rate of progress in microelectronics that when the device was first announced four years ago, it needed a fairly hefty Data General minicomputer to do the work. Now, using a microprocessor, the whole device sits easily on a corner of an office desk.

But these are very much at the leading edges of particular technologies. For the foresee*able future, the alphanumeric* keyboard and the cathode ray tube display will be the common method of communication with computer systems and via computer systems.

All devices of this sort are classed as "terminals," an unfortunate word to use for a gadget which should be the starting point for communication rather than the end. It derives from the early "dumb" devices, machines compatible with ordinary teletypes but capable of sending and receiving information at much higher speeds.

They are comparatively inefficient because each unit of information transmitted contains housekeeping details which keep the system in good order but has no intrinsic value to the user.

But even so dumb data terminals send and receive messages which are free of a "protocol" or message envelope. This means that different messages cannot be addressed to different terminals on the same telephone line and that there is no possibility of requesting retransmission of a message lost or corrupted during transmission.

Nevertheless, dumb terminals are cheap, and there are various ways to add intelligence to an *array of dumb terminals* to squeeze extra effectiveness out of them.

New company

These consist of intelligent "black boxes" which can be used to enable a number of dumb terminals to share one telephone line, for example, or provide automatic retransmission on error for them all.

The companies providing equipment of this sort include ITT Business Systems, Computer and Systems Engineering, and Micom Borer. This is a comparatively new company formed from Micom, a high-flying U.S. multiplexer specialist and Borer Systems of the UK, which builds modems.

But dumb terminals have no life of their own, and are entirely at the behest of their controlling host computer.

*Intelligent terminals, essen*tially stand-alone or clustered *systems that are user program*mable and have their own memory, have opened a new era *in digital communications.* According to the U.S. consultancy Creative Strategies International, almost $2bn of intelligent terminals will be shipped in 1985. CRI says users buy intelligent terminals because they allow users to process or manipulate data locally before passing it on to a host system or client.

In other words, they are the key elements in a distributed processing system which puts processing power at the elbow of the user.

The kind of developments the intelligent terminal will fit best include electronic mail, text editing and preparation and office automation as well as its clear role in communicating with mainframe computers for conventional data processing.

But terminals can come in un*expected forms. There has been* a great deal of work in the U.S. on developing the touch tone telephone as a computer input device.

This has been less evident in Europe, where rotary dials are more common. But in principle it is the simplest and cheapest way to talk to a computer, especially if linked to a voice response system.

The principle is that pressing the touch keys on the handset generates tones which the computer on the other end of the line interprets as digital signals. Numbers and letters can be put into the system according to a predetermined plan—for example, on a salesman's order sheet—and if the entry seems valid a pre-recorded voice acknowledges the data.

Forefront

Words are selected from a pre-recorded vocabulary to create suitable responses but with the rapid development of speech chips, it will not be long before the computer will generate its own acknowledgements and objections. Racal and Menzies Communications Systems have been in the forefront of marketing this technology in the UK.

Then there is the intelligent visual display unit. Work stations developed by companies such as Xerox already have the capacity to hold complex diagrams on their screens and transmit them to other workstations through a local network.

Control Data Corporation, which makes some of the largest commercial computers, has developed an educational network called Plato which uses *workstations* with *touch-sensitive screens*. The system presents pre-programmed tutorials —response to questions set by the system can be accomplished by using the keyboard or by touching the appropriate area of the screen.

Viewdata has turned the domestic television into a computer terminal. It can receive information from a computer store and, using a suitable keypad, messages can be put into the system.

Rediffusion Computers has already seen, through producing its own television sets, the advantage of building electronic office systems including ordinary television receivers to tap into a private viewdata network. The theory is that communicating with the computer is less fearsome through a familiar medium, such as television, than using keyboards or printers.

It's the iceberg principle. Most of the hardware and software on which the system depends should be invisible to the user.

Kevin Rafferty explains the reasons for the financial reforms which will make Hong Kong a safer place for investors

Sir Philip spring cleans the markets

SIR PHILIP HADDON-CAVE, Hong Kong's Financial Secretary, rounded off his recent budget speech with the ringing affirmation that the tiny British-run territory would "fulfil its economic and financial destiny which is to become *the* international city in the Far East."

To smooth the way authorities have already begun to set in motion a far-reaching and controversial series of reforms to rid Hong Kong's financial markets of what is left of their reputation as the greatest gambling casinos in the Far East.

The aim of the reforms is to make Hong Kong a safe and thoroughly respectable place for international capital, with a range of services and expertise rivalling the older centres of Europe and North America.

Given the faster economic growth rates of the Asia and Pacific region and the commanding presence of Japan, Hong Kong dreams that one day it might surpass London in importance if not New York. Incidentally, it hopes this might ensure Hong Kong a better chance of a continued independent existence well into the next century: even China, the theory goes, might balk at trying to swallow *the* international city in the Far East.

The Government's new reform measures, however, deal with the more immediate question of companies, banks and quasi banks and the financial market. The plans include:

- Requirements that directors, executives, advisers and shareholders with more than 10 per cent of a company's stock disclose both their holdings and *their dealings in the company's* shares.
- Lowering of the trigger point in the (still voluntary) takeover code making a general bid mandatory when a holding reaches 35 per cent.
- Unification of the four stock exchanges.
- A new association of banks with membership compulsory.
- Restrictions on the activities of the rapidly growing deposit taking companies to limit their loans to three months and above.
- Creation of a new category of merchant banks.
- The possibility of the removal of the interest withholding tax on foreign currency deposits which is said to have inhibited the development of Hong Kong as a funding centre for international loans.
- A hint that the moratorium on bank licences will again be lifted to allow new banks into Hong Kong.

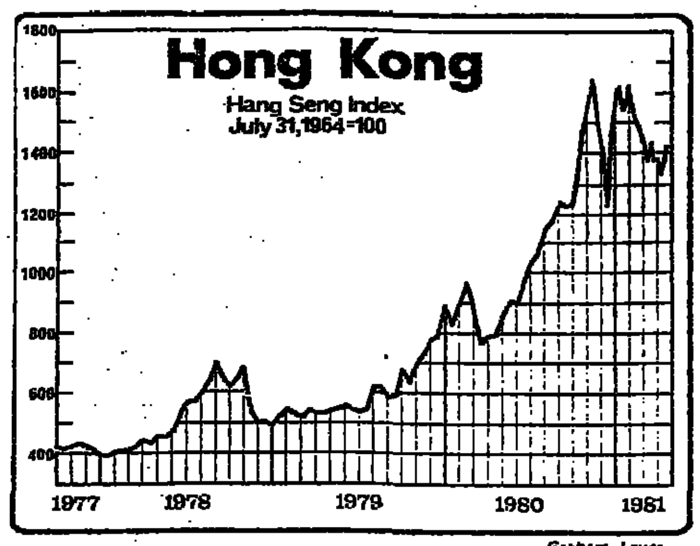
Most of these measures are being opposed by the leaders of the financial and business establishment in Hong Kong.

The cries of outrage have been loudest over the plans for share disclosures. The authorities have not wasted time. The Executive Council has already approved an outline scheme for disclosures and officials are struggling to express the Government's aims in the appropriate legal language.

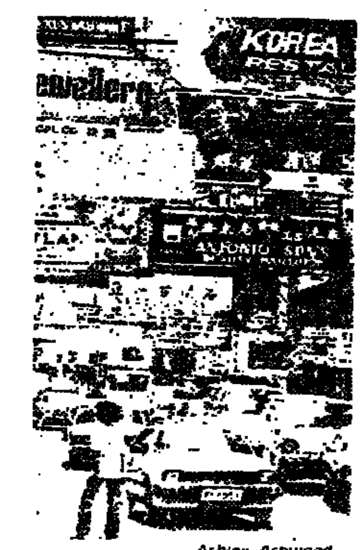
Un-Chinese

Objections are wide-ranging. Brokers who are afraid of losing business say that it is "un-Chinese" to disclose any business secrets. Other managers ask whether a more regulated market will be any better.

"Do regulations make sound markets, or do they just pay the salaries of a lot more civil servants." asked one of the leading executives of one of the top handful of Hong Kong companies.



Graham Lever



Ashley Ashwood

Sir Philip Haddon-Cave has masterminded the financial reforms which will change the old image of the island colony

Other analysts say the regulations could cause an outflow of money by businessmen, believed largely to be South East Asian Chinese, who do not want their identities or the size of their fortunes revealed to their own governments. Chinese laundering techniques are often said to be the best in the world, and there is some doubt that the authorities would ever be able successfully to unravel the complex investment chains.

Arguments about the new banking regulations are more complicated and reflect in part the struggle between the newer banks and the Hongkong and Shanghai Banking Corporation.

It is easy to see why Sir Philip Haddon-Cave felt he had to act. In the last few years the fastest-growing bodies have been the loosely controlled deposit taking companies which now number 340, or almost three times the number of licensed banks. The established banks accuse the deposit taking companies (DTCs) of poaching their traditional sources of funds and complain that whereas banks have to support an expensive branch network a DTC can set up for business with little more than a backroom office, desk and chair and then offer much higher rates of interest.

At one stage in December there was a 4 per cent differential, with banks paying 13 per cent on three-month deposits and DTCs about 17 per cent. Not surprisingly, deposits drifted to the DTCs.

According to Sir Philip the share of the total Hong Kong dollar deposit base held by banks fell from 85 per cent of total deposits of HK$70bn at the end of 1978 to 66 per cent of HK$139bn at the end of February this year.

The problem of the DTCs is complicated because they have a vast range of activities. About 180 of them are virtual merchant banks. Some, mainly subsidiaries of Hong Kong banks, are trying to get around the agreement which governs bank interest rates; others are in the hire purchase and consumer credit business and yet others are little more than pawnbrokers.

Solution

The Financial Secretary's solution is to curb the registered DTCs, limiting their deposits to three months maturity and above, thus leaving the banks a free field of short-term business. He also proposes to create a new category of licensed deposit taking companies—in effect merchant banks—which would have no term restriction on deposits but which would have to take initial deposits of HK$500,000 and above, would have to have paid-up capital of at least HK$100m and would not operate current accounts.

His plans have been criticised on a variety of grounds, not all of them consistent. The main grumble of most bankers is that the measures will effectively protect the big banks, and especially the Hongkong Bank with its huge deposit base, from competition.

Foreign bankers, especially the Americans, argue that it is not good for Hong Kong to have the Hongkong Bank, with more than 100 branches throughout the territory, controlling the deposit base and paying interest rates below market levels. The new Association of Banks which came into being this month is *likely to be the forum for fierce* argument about interest rates.

One of their problems will be that the Financial Secretary holds the interest rate agreement to be "an essential element in the Government's monetary policy" and from time to time he gives formal advice on what the level of rates should be. Sir Philip said in support of his proposals: "The Government's aim should be to reinforce the agreement by preventing any further relative diminution of the bank's deposit base and, indeed, by rolling back some of the recent shift of funds."

To support their case, officials as well as executives of the Hongkong Bank quote the damage done during the interest rate free for all during the 1960s. Critics are not convinced. Mr. Kent Price, Citibank vice-president, claims: "Hong Kong's banking system has been undermined by the Government's attempts to force the free market to accept its notions of interest rates and monetary controls. But the Government has decided not to lift these controls.

Best system

"Instead, it is preparing controls to bring the deposit-taking companies in line with the interest rate structure placed on the banks. A free market place is still the best economic system to give the greatest amount of good to the largest number of people. Rather than taking away the freedoms that sideline competitors enjoy, officials should consider giving banks a freer hand."

The authorities have not yet revealed how much competition they are prepared to allow in terms of numbers of banks or of merchant banks. In his budget Sir Philip hinted at the lifting of the moratorium on bank licences in force since August 1979. Some bankers have also suggested that a highly select group of 40 or even fewer "merchant banks" would be licensed, which would cause a scramble for places and raise questions about the ability of officials to make qualitative judgments.

Nor has the Financial Secretary said any more about his careful hint that he might be prepared to consider removing the interest withholding tax on foreign currency deposits of above a certain (unstated) size. Here Sir Philip is torn between the need to protect the territory's revenue and prevent it from winning a reputation as a tax haven and on the other hand the necessity of maintaining its international competitiveness.

Even though most Hong Kong bankers would not consider Singapore big enough to rank as a competitor, it is already ahead as an international funding centre and is making efforts to steal syndication business hitherto dominated by Hong Kong.

The need for proper share disclosures may be the key to Hong Kong's international ambitions. But there is a conflict between this ambition and the reality. Hong Kong is already a big marketplace. Its gold and money markets are important internationally. Its trade is big, and enormous in relation to GNP. Its position on the very doorstep of China gives it added importance — as does Japan's hesitancy in assuming a full world financial role.

But the reality is also that there *is* much of the gambling casino about Hong Kong. It is a place where sharks swim freely and where small fish are liable to be gobbled up whole.

Defenders of the *status quo* say that especially on the stock market this is one of the risks of doing business in Hong Kong. They note it does not seem to deter the smaller fish from joining in the swim.

Letters to the Editor

Contraction in steel

From the General Secretary, Iron and Steel Trades Confederation.

Sir,—In your leader of April 23, you seem anxious to vindicate monetarism and its apostles in office from responsibility for steel closures. You assume that what is taking place is the closure—induced by competitors—of obsolete plant. Yet you have to concede rising productivity at Hadfields and the modernity of Duports, two recent casualties. Do you seriously suggest that Hadfields would have closed without the onset of recession deliberately induced by this Government?

It is easy to assume that closures are inevitable and it is, regrettably, clear that you have swallowed the easy myths about overcapacity which are used to justify them. Yet you have received a copy of my union's evidence to the House of Commons industry and trade committee which details the far greater contraction of the industry in this than in any other country. In 1980 for example, Britain gave up 5.3m tonnes of steel capacity but the net EEC reduction was less than 1m tonnes. And this disastrous development has occurred when capacity utilisation in this country has been consistently the highest in the EEC.

You talk of overcapacity in engineering steels and call for "further cuts in the public and private sectors." But what is happening in reality is that UK plants are closing to make room for imports. They will be the chief beneficiaries of recent events.

Is the fact of collapse proof positive of lack of competitiveness? Not so. The private sector in particular faces competition with subsidised rivals in Europe. Yet it has been unable to obtain preference on prices of electricity for large users, which is the case in Germany, and also had to absorb last year's huge increase in the price of gas. This is not "the state of the steel market" but the effects of foreign subsidies and Government indifference.

But private steelmakers in the UK face a double problem because they compete in part with the public sector. The effect of British Steel Corporation price cutting, which we backed in order to recover market shares, is now not to hinder imports but to put British firms out of business. This is a ludicrous outcome since such European overcapacity which does exist must now, following three and a half years of closures, be on the continent and not here. European prices are now set to rise, but unless uncompetitiveness is tackled at its roots, which are not in this country, a future collapse in the price structure cannot be ruled out.

W. Sirs,
Swinton House,
324 Gray's Inn Road, WC1.

Finding the money

From the Managing Director, Hart Browne and Curtis

Sir,—Nobody likes to have their living standards reduced but is the civil service different to the administrative tail of any other organisation? Nobody in any organisation disputes the need for efficient administration but there can only be so much money to pay for it.

Should we not, therefore, look at the civil service as an overhead which must be shared by all productive industry and commerce in the UK? The percentage of the gross national product to be allocated to pay for the civil service could be then decided once and for all. In this way civil servants would have not only an interest in the country's prosperity but would never need to bargain for their pay. To earn more all they would have to do is to ensure that industry produces and sells more. It would be up to the civil service itself to decide whether the job was done by a few people who are highly paid or a large number who are paid proportionately less.

G. F. Hart.
29, Sackville Street,
Piccadilly, W1.

Civil service strike

From the Managing Director, EBS (Management).

Sir, — Philip Bassett (April 22) provides the most encouraging report on the success of the Government's policy to date and is certainly a vindication of that policy.

The weakness of the Government's position is that it has inherited a public-sector pay structure that has antagonised many of the conscientious and talented civil servants whose interests are diametrically opposed to those of the unions representing the big battalions at the bottom end of the labour market.

The irony is that the low level trogs have been exploiting those civil servants with the talents and skills to hold down key jobs to fight their battles. And yet, what employees of intelligence have any interest in pushing the case for standard across-the-board percentage pay increases? The only satisfactory pay structure for the able is one in which there are no automatic annual pay increases (the only way to achieve zero inflation) and where all money available for improved pay is *dished out on a discretionary* individual merit basis.

Poor pay in the civil service for the right people has arisen precisely because too much of the available cash has been used up on the trogs largely as a result of the power wielded by the unions representing the lower grades of labour aided and abetted by Governments who have been over-sympathetic to this course and too readily influenced by the weight of numbers.

And yet it is the people at the bottom end of the civil service labour market who are most readily dispensable, who can most readily be fired and replaced. The people who have suffered most (more even than the general public) are the able civil servants with special skills who have seen their living standards eroded and who have been compelled to throw in their lot with their insubordinate subordinates in order to get any pay rise at all. Not only have they suffered economically, but also in moral terms. For someone who has spent his life imbued with the spirit of public service, who has been accustomed to enjoying a position of high esteem in the community at large to find himself/herself classed by the public with the scruffy creatures wandering around with Civil and Public Services Association armbands must be a sad and depressing experience with which we can all sympathise.

The answer is not a better "across-the board" pay increase but greater power for heads of separate work units to run their units as if they were independent businesses. They should be told that they would have to fire their inefficient passengers in order to provide the pay rises for the people they want to attract and motivate. Tough for the people who are fired but a shot in the arm for civil service morale.

Dryden Gilling-Smith.
38 Finsbury Square, EC2.

Change jobs

From Mr. R. Marshall.

Sir, — Mr. White of the Ordnance Survey (April 23) says action needs to be taken because pay has in effect been reduced.

The civil service unions' "action" has been to try to cut off their own tax revenues which can only lead to further lost jobs or reduction or withdrawal of the existing offer. Given the *cash limits the only way to* maintain pay levels is to lose jobs, e.g. by compulsory redundancies, on a par with the private sector where much suffering has already been felt.

Alternatively there could be voluntary moves by civil servants to comparable jobs with better conditions which the unions implicitly believe exist outside the civil service. The employers might not ignore ants (to use Mr. White's analogy) if they moved about more industriously. Some redundant executives and unemployed graduates might like the chance to fill any vital vacancies left by more mobile civil servants—and then Ordnance Survey maps might not be so expensive.

R. C. Marshall.
25, Dancswood Close,
Weybridge, Surrey.

The fight for freight

From Mr A. McKinnon

Sir,—The reaction (April 22) of the Road Haulage Association to British Rail's proposal to offer a complete distribution service for finished goods, while quite understandable, is unlikely to win much sympathy.

To argue that the freight market, in its current depressed state, is too small for British Rail to expand its activities in this field assumes that the road haulage industry has some divine right to remain at its present size. In fact, as your article reports, many hauliers are having to under-price themselves to retain traffic. Furthermore many hauliers' operating costs are being held unrealistically low through the under-maintenance of vehicles, underpayment of taxes and the flouting of traffic regulations. If operating standards were raised *and the resulting cost increases* translated into justifiably higher charges, it is likely that the model split would be redressed in favour of rail, even without British Rail's new initiative in distribution.

With this new distribution service, British Rail should be better able to exploit its advantage as a more energy efficient mode and benefit from the logistical constraint imposed on road hauliers by tighter restrictions on drivers' hours. Not all sectors of the road haulage industry need fear this new competition from the railways, however. The new service will provide a welcome source of business for hauliers specialising in local collection and delivery. It will be the hauliers engaged in longer distance transport who will suffer a loss of traffic.

Though this may leave the long-distance sector of the haulage industry with excess capacity, it should be remembered that the railways also have excess freight-carrying capacity, and that the road freight industry should find contraction a good deal easier than the railways as it is not encumbered with such large amounts of fixed capital.

Alan C. McKinnon,
Department of Geography,
The University,
Leicester.

Plastics and fibres

From the Warden, University of Glasgow.

Sir,— Despite Sir Maurice Hodgson's protestations to the contrary (April 23) I believe ICI has suffered a failure of business strategy in some of its areas of operation and over a number of years at that. If I could attend the AGM instead of earning my living and if I dared stand up and ask a few questions my enquiries would include the following points.

The fibres division performance has finally become so gruesome that it has effectively been put to the sword. How many years is it since this division produced a good return on capital employed, as distinct from losses or marginal profits which could be ignored by virtue of the financial strength elsewhere in the group? By what flight of fantasy has any strategist in the company been able to see any future in production of any but specialist fibres for the past five years at least, in view of the huge overcapacity in polyesters and polyamides retained by Du Pont in the U.S.A. and the German majors, to take only two examples?

Why does plastics division continue to strive for greater scale of production and marginal improvements in cost in what any realist would have seen for five years as the no-hope areas of pvc and low-density polyethylene? The same huge overcapacity exists as in fibres; profit margins will be just as low because of competition even if consumption doubles from present levels. The historical accident of early production which gave pvc its market dominance should not disguise the fact that it is otherwise a poor material, environmentally problematical and having to be stuffed full of plasticisers, stabilisers, antioxidants, fillers and pigments to make it usable at all.

ICI should have been out of these areas years ago.

(Dr.) A. Scotney.
University of Glasgow,
Dalrymple Hall,
22-26 Belhaven Terrace,
Glasgow.

Today's Events

GENERAL

UK: Mr. James Prior, Employment Secretary, addresses Industrial Society conference, London.

Amalgamated Union of Engineering Workers' conference opens, Eastbourne (to May 1).

Mr. Michael Foot, Opposition leader, speaks at rally, Hanley: addresses meeting of local government candidates, Birmingham.

Mr. Denis Healey, Opposition deputy leader, speaks at National Union of Mineworkers Midlands area conference, Blackpool.

Mr. Roy Hattersley, Opposition Home Affairs spokesman, addresses public meeting, Swanley.

London Chamber of Commerce meeting on tax and the small firm.

National Union of Agricultural and Allied Workers statement on 245-T (weed-killer).

British Caledonian Airways publish annual report.

Sir Ronald Gardner-Thorpe, Lord Mayor of London, opens Variety Clubs' international convention, Grosvenor House, W1.

Storage, Handling and Distribution Exhibition opens, Earls Court (to May 1).

St. Andrew's Golf Week opens, Fife (to May 3).

Institution of Electrical Engineers meeting on design help for the smaller firm, London.

Institution of Mechanical Engineers meeting on 50 kV locomotive for a heavy mineral railway, London.

Overseas: Sir Ian Gilmour, deputy Foreign Minister, continues visit to Turkey (to April 30).

PARLIAMENTARY BUSINESS

House of Lords: Animal Health Bill, committee. British Telecommunications Bill, second reading. Short debate on needs of children.

House of Commons: Wildlife and Countryside Bill, second reading. Motions on Diving Operations at Work Regulations.

COMPANY MEETINGS

See Financial Diary on Page 4.

LUNCHTIME MUSIC. London

Piano recital by Mary Harrison, St. Lawrence Jewry, Gresham Street, 1.0 pm.

Organ recital by Professor Donald Paterson, St. Michael's Cornhill, 1.0 pm.

Recital by Susannah Self (soprano) and Alan Worth (piano), St. Anne and St. Agnes, 1.10 pm.

NEWS ANALYSIS: BRITISH DREDGING RECOVERY PLAN

RMC bid poses dilemma for shareholders

BY TERRY GARRETT

A CRUCIAL point has been reached for shareholders in British Dredging. Having suffered years of losses and no dividends it looked last year as if the company had turned the corner. The directors have come up with proposals for an equity injection but Ready Mixed Concrete, holding nearly 28 per cent of the equity, has come forward with a full bid for the company.

British Dredging is asking its shareholders to approve on Friday a one-for-four rights issue underwritten by Equity Capital for Industry. ECI will also subscribe for further new shares so that it has a 12½ per cent holding. The rights issue is priced at par, 25p, compared with a market price ahead of the proposals of 21p.

ECI will end up with a stake in Dredging between 12½ and 20 per cent while the company will raise between £721,000 and £1,236,000, depending on how many shareholders accept the rights. ECI is also offering a £300,000 loan facility.

RMC, which has held a substantial stake in the aggregates and construction company for many years, opposes the arrangements on two main fronts: the equity dilution for shareholders and the "extensive rights" granted to ECI which would not be available to other holders.

ECI—unlike RMC—would get a man on the Dredging board and be provided with monthly management accounts and budget projections.

RMC wants other shareholders to line up behind it and throw out the proposed equity injection. If it wins the day on Friday RMC will launch an offer for Dredging. It is proposing 35p a share in cash or an equity swop worth just over 36p.

That puts a value on Dredging of £4m, or £2.9m on the part RMC does not already own.

RMC is also blocking Dredging's attempt to wipe out its deficit on reserves by cancelling the share premium account. If Dredging could do that it would then be able to pay dividends. However, to be carried, the resolution would need secure 75 per cent acceptance.

Even if other shareholders want Dredging to restructure so that it can pay dividends RMC will block the proposal on Friday, an action which looks solely designed to put pressure on other shareholders.

Mr. Fane Vernon, chairman of Dredging, made it clear yesterday that his company would one way or another resume dividend payments for the current year. If the special resolution is thrown out on Friday Dredging will take measures to "ensure" that the company can pay dividends out of future profits. Profits could be realised from properties, for example, in order to clear out negative reserves.

The history of Dredging is little short of appalling. There have been many years of losses, no dividends and acrimonious boardroom battles. The company started the 80s in a very sorry state, yet there are signs that it has been getting in better shape since Mr. Vernon took the helm as chairman in February last year. Immediate action was taken on loss-making contracts and head office costs were slashed by £70,000. For the 12 months to December 1980, Dredging showed a pre-tax profit of £510,165 inclding exceptional credits of £118,471.

However, the company is still dogged by high borrowings. Interest charges last year ate away £386,721 of Dredging's trading profits and capital gearing is around 55 per cent.

Dredging was thinking in terms of a capital injection last autumn. In September Mr. Vernon approached RMC to see if the building materials group wanted to buy out Dredging's 50 per cent holding in British Dredging (Sand and Gravel), a joint operation of the two operating dredgers in the Thames. The informal discussions also took in the possibility of a third party buying Dredging's interest.

According to Mr. Vernon this could have "injected up to £3m into Dredging, cleaning out the overdraft and putting the company much nearer to good profits and a dividend."

The discussions got nowhere. According to Mr. Jenkins, RMC's finance director, his company was "happy to preserve the status quo."

It was then that Dredging turned to ECI which had been hovering in the background since the spring.

When Mr. Vernon put forward his proposals for the ECI underwritten rights issue RMC was clearly miffed. RMC offered to underwrite the rights issue instead but Mr. Vernon was equally unhappy at the thought that RMC could end up with 42 per cent of the equity giving what he describes as a "stranglehold on the company at a price of 25p. That would be against the interests of other shareholders."

RMC's reaction to the issue proposals was predictable. Shareholders are rarely pleased to see their holdings diluted but in Dredging's case, with the shares trading below par and a very poor trading record, the Board has few alternatives.

The Dredging board has the backing of M and G, the only significant institutional shareholder with 7 per cent, and probably the support of the founding Bowles family with around 10 per cent. Proxies covering 1m shares have been lodged showing an almost total acceptance to the Dredging proposals.

Ready Mixed also claims some shareholder support.

It looks as if the Board has backing of around 27 per cent so far—a figure not far short of RMC's holding. But there are still a lot more votes to be cast and neither side can be feeling confident yet.

RMC's 35p offer compares with an asset value of 42p which could rise to around 50p with the property revaluation planned for this year. On a profits basis, stripping out the exceptional items, the fully taxed exit p/e at 35p is 27 but obviously the Dredging directors are taking the view that the recovery is only just beginning.

Mr. Vernon says: "I am only half way through my job. I am working towards a substantial profit in 1982 but RMC is trying to walk away with the company just as it turns the corner. I do believe even if RMC offered twice the price it would still be a good buy for them."

The £3m that RMC would have to pay if the bid goes through is also little different to the figure Mr. Vernon was putting on the associate he was trying to offer to RMC last year. Not surprisingly RMC's director Mr. Jenkins disagrees with Vernon's estimate of what the Thames fleet is worth.

If RMC wants Dredging a higher offer is going to be needed—though if it withdraws, Dredging's market price, which has come up to 34p, looks set for a relapse.

Uncommitted shareholders should vote the rights issue through. Whether they should then accept the rights or let ECI take the shares must await developments from RMC. The Dredging board's bargaining position will be stronger once it has got ECI in and RMC's holding down.

Amal Metal reduces dividend

Amalgamated Metal Corporation has cut its dividend despite a rise in 1980 pre-tax profits from £8.24m to £10.86m. The final dividend is 6p net, reducing the total payment from 14p to 9p.

Turnover of this Preussag A.G. subsidiary showed an increase from £1.2bn to £1.31bn. Profits included a £691,000 (£522,000) share of associates and investment income of £2.16m (£1.43m). It was subject to tax of £5.36m (£4.12m), minority profits of £2.62m (£1.73m) and extraordinary debits of £1.25m (credits £345,000). This left the retained balance down from £1.73m to £953,000.

Before extraordinary items earnings per £1 share totalled 44.1p (36.1p) and after such items they were 24.2p (41.6p).

Exchange losses arising on consolidation amounted to £1.17m (£1.24m). On a CCA basis pre-tax profits were £10.93m (£3.55m).

New investment group to cash in on search for oil and gas

A NEW offshore investment company, specialising in energy investment worldwide, is being offered to the public this week. Underwriting has been completed for the offer by Energy Resources and Services of 5m shares of U.S.$5 each at an offer price of U.S.$10 per share.

ERS is incorporated in Panama and has been formed under the auspices of London-based investment managers John Govett and Co. and Ferrier Lullin et Cie S.A., the Swiss banking business. Both will act as investment advisers.

The directors of ERS say they have been informed that applications have been made for 3.75m of the shares, all of which will be allotted in full. The balance of the issue has been underwritten by Cazenove and Co.

In the prospectus, published today, the directors say that there will be four main areas of investment: oil and gas exploration and producing companies; the oil service industry; alternative sources of energy; and direct interests.

While the funds of ERS will be invested mainly in listed securities, it is intended that a proportion will be put directly in actual and prospective energy-producing properties. Emphasis will be given to the U.S.

On the investment background the directors say: "The effects of the rising price of oil and gas in real terms have been apparent throughout the energy industry. We believe that, with continuing pressure on supplies of oil and gas, prices will continue to rise in real terms and exploration and development activity therefore will be maintained at a high level for the foreseeable future."

The by-laws of ERS provide for an EGM on or about May 1988 "at which shareholders will be asked to decide if they wish ERS to continue in existence." If more than 50 per cent of the shareholders vote against, the company will be dissolved. If the company continues shareholders who wish to realise their investment should be able to do so at close to asset value.

● comment

Judging by recent issues from the investment trust sector, institutional appetite for specialist investment vehicles appears to be strong. Cynics may feel — given the discount at which shares in TR energy have been trading — that this latest offer from the Panamanian registered Energy Resources and Services is another mouthful of the same diet. But although by no means a high flier John Govett's solid reputation plus the Swiss connection' gives this new issue a certain appeal. The new company is closed end and based offshore partly as a hedge against the reimposition of exchange controls and partly to allow the inclusion of insurance clauses against a widening discount. The limited life span, though not unique, is further welcome evidence that the new breed of specialist investment companies appreciate their vulnerability to changing fashion. Institutions wanting a decent chunk of the action will probably wish to subscribe straight away — the small investor, however, is unlikely to lose out by biding his time and hoping for a discount when dealings start.

Laird Group activity change to continue

PRESSURES on industries where the Laird Group operates will continue, and the company's range of industrial activity will therefore continue to alter, Sir Ian Morrow, chairman, tells members in his annual review.

The process of change will be assisted by the search for fresh acquisitions both in the UK and abroad—within and outside the group's present interests—and efforts will be made to see that internal development is reinforced, he states.

Traditional industries came under great pressure during 1980, "with the result, for example, that the group's participation in steel and in ship-repairing has ceased."

He adds that the £22m purchase of New York Twist Drill Corporation is part of this continuing policy.

As reported on April 13, pre-tax profits for last year advanced from £10.73m to £13.57m on turnover down from £207m to £194m. The dividend is lifted to 3.7p (3.4p) net per share. New York Twist Drill profit contribution, as from last October, was £448,000.

A divisional split of turnover and the pre-tax surplus shows: transport systems £107.25m (£91.77m) and £7.02m (£6.23m); motor components £33.77m (£38.41m) and £1.99m (£3.26m); specialist engineering products £42.99m (£29.85m) and £3.41m (£3.21m); service industries £10.04m (£7.55m) and £1.08m (£1.06m); the Patent Shaft Steel Works £39.48m turnover and £1.14m loss for 1979. Interest received was £70,000 (£1.89m paid).

BOARD MEETINGS

The following companies have notified dates of board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available as to whether dividends are interims or finals and the sub-divisions shown below are based mainly on last year's timetable.

TODAY

Interims:—S. Lyles, Safeguard Industrial Investments.

Finals:—Allebone, Estates and General Investments, Gerrard and National Discount, Hunting Petroleum Services, Jersey Electricity, London United Investments, Pentland Industries, Scottish Northern Investment Trust, Simon Engineering, Spear and Jackson, Viking Resources Trust.

FUTURE DATES

Interims:—

Border & Southern Stkhldrs. Tst.	Apr 28
Fulcrum Investment Trust	May 8
Samuel Properties	May 1

Finals:—

Allied Leather Industries	May 28
Caffyns	June 9
Cole (R. H.)	May 1
House Property Co. of London	May 1
Lake View Investment Trust	Apr. 28
More O'Ferrall	May 12
Moss Bros.	May 1
Mowlem (John)	Apr. 30
Runciman (Walter)	May 19
Shiloh Spinners	Apr 29

NCC ENERGY

Talks aimed at closer co-operation between NCC Energy and Simplicity Patterns are proceeding according to timetable, Mr. Graham Ferguson Lacey said yesterday in New York.

His appointment as chairman of the executive committee of Simplicity last week enables the two companies to undertake more detailed discussions.

NCC has bought a 15.4 per cent stake in Simplicity which makes it the largest single shareholder.

FT Share Information

The following securities have been added to the Share Information Service:—

American Oil Field Systems (Section: Oil and Gas).
Appian Energy Corporation (Oil and Gas).
CSR Limited (Industrials).
Espley-Tyas Property Group (Property).
Falmouth Petroleum (Oil and Gas).
Humboldt Energy (Oil and Gas).
T. R. Energy Public Company (Oil and Gas).

STEAUA ROMANA

Dealings in the shares of Steaua Romana (British) will be permitted under Rule 163 (3) with effect from May 1, 1981, the council of the Stock Exchange has agreed.

SPAIN

1981 High	1981 Low		April 24 Price %
304	251	Banco Bilbao	304
346	280	Banco Central	346
270	229	Banco Exterior	269
307	229	Banco Hispano	307
129	120	Banco Ind Cat	124
348	284	Banco Santander	332
189	148	Banco Urquijo	183
320	263	Banco Vizcaya	319
252	204	Banco Zaragoza	214
150	82	Dragados	149
75	45	Espanola Zinc	75
62.5	56.5	Fecsa	61.2
35	22	Gal Preciados	28
71	65.7	Hidrola	65.7
65.2	52	Iberduero	58
101.7	70	Petroleos	101.7
88	70	Petroliber	88
102	81	Sogefisa	81
63.5	60	Telefonica	61
66	60	Union Elect.	65

CORAL INDEX
Close 583-588 (+3)

هكذا من الأصل

INTERNATIONAL CAPITAL MARKETS

CREDITS

BY JOHN MAKINSON

Sweden looks to U.S. grassroots

NEVER AT A LOSS for new ideas, the Kingdom of Sweden has decided to raise $500m in a U.S. prime rate-linked deal led by Chase Merchant Banking Group.

The timing of the new credit is a little curious, for the ink is barely dry on the successful $1.4bn loan for the Kingdom managed by Morgan Guaranty and signed less than a fortnight ago. But the managers of the new operation are hoping to obviate any congestion problems by raising the funds exclusively in the U.S. and overwhelmingly from regional banks. For a foreign borrower, this is an unprecedented step.

First omens are auspicious. Regional banks are apparently keen to accommodate a triple "A"-rated sovereign borrower which, while active on the Yankee bond market, has never incorporated a prime element in syndicated borrowing.

Yet Chase will still have to work hard to earn its fees. The seven year loan carries a spread of 15 basis points over Chase's quoted prime commercial lending rate for the first four years and 25 basis points thereafter. These margins are tighter than on the prime element of Belgium's $1.5bn credit, arranged late last year, and Belgium is a borrower of comparable stature.

Yet the real resistance will not be to the spreads themselves but to a complex pricing mechanism tied to certificate of deposit rates. Under this arrangement, if the secondary market price for 90 day CD's—adjusted to take account of Fed reserve requirements and FRIC insurance premiums—falls 110 basis points below the Chase prime for two consecutive weeks, then pricing will switch to 110 points above the CD rate.

The Swedes, who originated the structure of the credit, are proving as sharp-pencilled as ever. They recognise that when money market rates fall significantly below prime, as has often been the case in recent months, banks can obtain a substantial margin over their cost of funds on prime-related credits. By introducing a CD link, this margin will be limited.

The system does admittedly work in the other direction. If the CD rate exceeds Chase's prime, the loan will carry the agreed spread over the CD rate. However, since over the past seven years the adjusted CD rate has been 75 basis points on average below Chase prime, the banks are more likely to be confronted with the less favourable alternative.

The loan will operate as a revolving credit for two years, after which repayments will be made semi-annually to reduce the average life of the loan to around five years. Interest payments will be made quarterly. Chase is hosting an information meeting in New York this week but the management group is not expected to be finalised until early next month.

Elsewhere, Lloyds Bank International has also been breaking new ground on a much smaller scale. It has arranged two sterling syndicated credits for Spanish borrowers which, combined with the revival of the sterling "bulldog" bond market and the International Monetary Fund's decision to lend in sterling, reflect the revival of sterling as a major borrowing vehicle.

Both deals are small and arranged on a "club" basis. One is for Enher, the electricity utility, and is co-managed by Hill Samuel. The £15m credit is for eight years, with 4½ years grace, and takes the form of an acceptance credit facility for 3 years with an acceptance commission of ⅜ per cent. The deal then reverts to a five-year term loan with a margin of ⅝ per cent over sterling London interbank offered rate.

The second is for Fuerzas Electricas de Catalunia. Also for eight years with 4½ years grace, the credit carries a spread of ⅝ per cent for the first two years and ¾ thereafter. Lending banks wil absorb 1.2 per cent withholding tax.

CURRENT INTERNATIONAL BOND ISSUES

Borrowers	Amount m.	Maturity	Av. life years	Coupon %	Price	Lead manager	Offer yield %
U.S. DOLLARS							
‡§Community Psychiatric	15	1996	15	8¾	100	Merrill Lynch	8.750
‡Petro-Lewis Int. F. NV	20	1986	5	9	100	Blyth Eastman Paine Webber	9.000
§CSWI Intl. Fin. NV	20	1996	15	9	100	Shearson Loeb Rhodes, Kleinwort Benson	9.000
‖§Apache Intl. NY	30	1996	15	8½-9	100	E. F. Hutton	*
‡†CFE	100	1988	7	5¼Φ	100	Nomura Securities	5.833Φ
†Merrill L. Ov. Cap. NV	100	1987	6	—	99¾	Merrill Lynch	—
†Oest. Kontrbk.	75	1986	5	5¼Φ	100	EBC, Orion	5.319Φ
D-MARKS							
World Bank	150	1991	10	10	99¾	Deutsche Bank	10.04
SWISS FRANCS							
‡Pihrn Auto. (g'td. Aus.)	70	1991	—	7	99¾	SBC	7.036
Japan Develop. Bank	100	1991	—	6¾	100	SBC	6.750
VEAS	30	1991	—	7¼	99¾	Soditic	7.286
‡**EIB	50	1987	—	7½	100	UBS	7.500
‡**§Osaka Transformer	25	1986	—	4⅞	100	UBS	4.934
GUILDERS							
**Euratom	150	1988	7	11½	99¾	ABN, AmRo	11.663
YEN							
‡Indonesia	10bn	1991	8	8.6	100	Nomura Securities	8.785
SDR							
‡†ENEL (g'teed Italy)	100	1986/9	5	.5	100	Dillon Read Ov. Corp.	5.063
‡†PUK	50	1988	7	—	100	Indo-Suez, Kredietbank	—

* Not yet priced. ‡ Final terms. ** Placement. † Floating rate note. Φ Minimum. § Convertible. †† Registered with U.S. Securities and Exchange Commission. ¶ Purchase Fund. ‖ Postponed.
Note: Yields are calculated on AIBD basis.

BONDS

BY FRANCIS GHILES

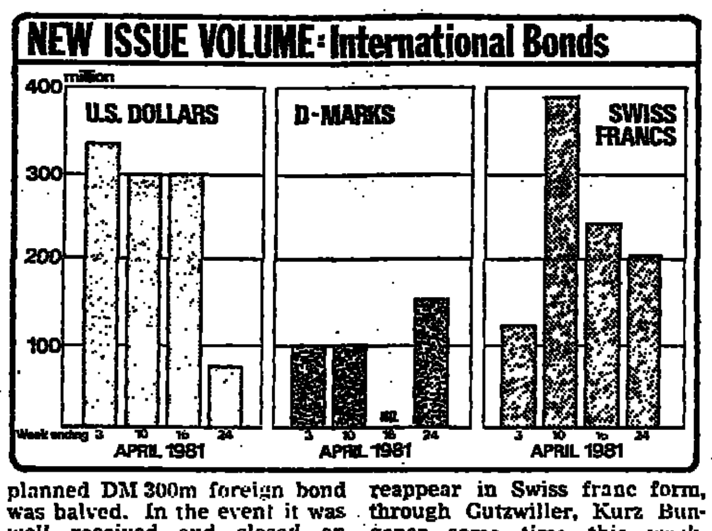
Bulldog market comes of age

OFFICIAL CONFIRMATION is expected today that the World Bank will raise £100m through a five-year bond issue in the sterling market. The issue, which is likely to be led by Baring Brothers and offered for sale on Thursday, would be the fifth "bulldog" bond to be arranged since this sector of the market was reopened last summer. It would also be the largest.

The World Bank would join a list which already includes three Scandinavian names and the Mexican state oil company, Pemex. The World Bank enjoys sovereign status under Bank of England rules and the bond will be eligible for gilt edged commissions provided it is offered for sale to the public. The yield offered to investors is expected to be between the 13.53 per cent currently available on the Swedish "bulldog" launched a few weeks ago, and the 12.94 per cent that investors can obtain on the 12 per cent 1986 gilt edged stock.

The issue will mark the return to the sterling market of a borrower which has not tapped this sector for a decade. One reason why the World Bank wants to raise sterling denominated paper is that it is encountering difficulty this year in raising funds in other sectors of the international bond markets.

Some of the Bank's recent Swiss franc and guilder denominated issues have been undersubscribed and last week, a planned DM 300m foreign bond was halved. In the event it was well received and closed on Friday night at its issue price of 99¾.



Elsewhere in the D-Mark foreign bond market, trading was thin, with prices of seasoned issues virtually unchanged.

The West German Capital Markets Sub-committee meets today to decide the calendar of new D-Mark foreign bond isues for May, mindful that of the April calendar, only DM350m of the scheduled DM600m-700m was eventually floated.

The planed D-Mark issue for Norges Kommunalbank, which was cancelled 10 days ago because the borrower did not wish to pay a coupon as high as 10 per cent, is expected to reappear in Swiss franc form, through Gutzwiller, Kurz Bungener some time this week. However, despite the steady flow of new issues in this sector coupons are still rising, spurred on by the higher inflation rate and ever higher deposit rates. Last week alone the interest rate on six month Euro-Swiss franc deposits climbed by ⅜ point to 9¼ per cent.

In the dollar sector, investors are still on holiday. A lone $75m floating rate note issue for Oesterreichische Kontrollbank was announced on Friday evening, but there were no new fixed interest dollar or convertible bonds. The convertible on offer for the U.S. oil and gas company Apache was cancelled because of poor market conditions.

Meanwhile the first ever oil-linked convertible Eurobond, for Petro Lewis, met with a very poor market reception despite terms being improved and the initial amount on offer cut by $10m to $20m. On Friday evening it was trading at a discount of 2¾-4 points from its issue price of par.

The 14½ per cent bond to 1986 launched ten days ago for Bank of Montreal performed poorly, in line with the market. It was quoted at 97½-¾ by the lead manager, UBS (Securities) and at 97.37-87 by Ross and Partners (Securities) but lower prices were being quoted elsewhere.

Seasoned fixed interest dollar bonds shed about a point on the week, in line with the market performance in New York, although prices fluctuated less violently in Europe than across the Atlantic. With short-term U.S. interest rates still rising and the long term outlook anything but clear, investors prefer to keep their money on deposit, where it yields more, than to buy any long-dated paper. Few bond managers expect this situation to change quickly and thus expect the market to remain morose.

Two foreign bonds are expected to be announced this week in New York, a $100m five year Yankee issue for Venezuela through Salomon Brothers, and a $100m issue for New Brunswick Electric Power Company through First Boston.

U.S. BONDS

BY PAUL BETTS

Drastic devices to lure investors

ENCOURAGING NEWS last week on the inflation and money supply front did little to shake off the U.S. credit markets' blues. Indeed, bond prices continued to lose ground and interest rates edeged upwards all week; had it not been for the modest drop in the weekly money supply figures on Friday and the small 0.6 per cent increase in last month's consumer price index, the depression in the bond market could have ben far more pronounced.

In any event, things were pretty bad. The market's anxiety was eloquently reflected when the Alabama Power Company was forced to offer investors a record yield of 17.5 per cent to sell $75m worth of new 30 year bonds. The previous record return on a similar issue was set last month when Pacific Telephone and Telegraph sold $150m of 40-year bonds at a yield of 16.29 per cent. The Treasury's auction of $4.25bn last week turned into a minor fiasco, drawing a very small number of bids and resulting in surprisingly high yields.

In such a market, borrowers are having to resort to some fairly drastic devices to attract investors. Following the recent trend of deep discount issues, J. C. Penney, the large retail store group, came up with a curiosity of its own involving a $200m issue of 8-year notes offering a "zero coupon." The notes pay no interest, but were priced at only 33.247 to give a yield to maturity of 14.25 per cent. Despite the weakness of the market, the novelty Penney issue was a sell-out.

A broad combination of factors, ranging from the Federal Reserve's monetary policies, the inflation outlook and the financing needs of the Treasury to the huge shadow calendar of corporate offerings waiting in the wings for an opportunity to come to market, continues to keep the lid firmly down on the bond market.

Although the weekly money supply declined by a meagre $100m, it rose in the previous two weeks by $8.1bn. This large jump, acording to Wall Street economists, is now prompting the Fed to adopt a firmer posture. So far this month, the rate on Fed funds has been lifted into the 15-16 per cent range. Moreover, with the Reagan Administration pressing the Fed to head of any further aceleration in the monetary aggregates, and with rapid monetary growth expected next month, Wall Street expects the Fed funds rate to go higher.

The inflation outlook continues to be troublesome, even though the 0.6 per cent increase in the consumer price index in March was encouraging. But that increase was due largely to the slowdown in energy price increases, moderate advances in food prices and rebates offered by American car manufacturers. And according to Mr. Philip Braverman of Chase Manhattan, energy prices are only flattening temporarily, while agricultural prices are already rising, and the lifting of the grain embargo is likely to add more upward pressure.

Meanwhile, Mr. Henry Kaufman of Salomon Brothers delivered a major speech last week attacking the Reagan economic programme and claiming it would not help reduce inflation.

Moreover, the market faces some more immediate pressures this week. Wall Street expects the U.S. Treasury to announce a quarterly refunding package on Wednesday designed to raise about $3bn in new cash. The overall package is expected to include about $3.5bn in a 3½-year note, about $2bn in a 10-year note and $1.75bn-2bn in a 30-year bond.

At the same time, the mass of new corporate, state and municipal borrowing plans continues to grow, waiting for a window to open in the market. At the latest count, Moody's estimates there are some $18bn of corporate issues waiting in the wings, that figure is regarded as conservative.

U.S. INTEREST RATES (%)

	Week to April 24	Week to April 17
Fed Funds weekly average	15.74	15.18
3-month Treasury bills	13.65	13.77
3-month CD	15.30	15.50
30-year Treasury bond	13.23	13.25
AAA utility	15.50	15.25
AA industrial	14.63	14.50

Source: Salomon Bros., estimates.

FT INTERNATIONAL BOND SERVICE

U.S. DOLLAR STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Amer. Air 15⅞ 86 (WW)	55	95⅞	100⅛	0	+0½	15.19
Amoco 13¾ 88	75	93⅛	93⅝	−0⅛	−2¼	14.83
CIBC 14½ 84	185	98¾	99⅛	0	−0⅜	14.92
CNE 12¾ 91	100	89½	90	−0¼	−2¼	14.77
Citicorp O/S Fin. 10 86	300	83½	84	0	−1¼	14.66
Citicorp O/S Fin. 12 87	200	88⅞	89⅛	−0¼	−2	14.66
Con. Illinois O/S 9⅜ 86	150	82	82½	+0⅛	−1½	14.87
Dupont Canada 13½ 91	65	92¾	93¼	−0⅛	−2⅝	14.87
EEC 11 95 (May)	75	80	80½	−0⅛	−1⅛	14.33
EEC 11 95 (August)	70	78½	79¼	0	−0⅜	14.57
EIB 12¾ 89	75	90	90½	−0½	−1	14.91
Eldorado 13¾ 86	50	93⅝	94⅛	0	−1½	15.08
Elec. de France 10 88	125	79⅝	80⅛	−0⅛	−2	14.69
Elec. de France 13 88	125	92¾	93¼	0	−1⅝	14.66
Export Dv. Cpn. 9½ 86	150	82	82½	−0⅛	−1¼	14.96
Fed Bs. D. 12¾ 85 (N)	50	91⅞	92⅜	0	−1⅛	14.76
Fin. Exp. Credit 10½ 85	50	84⅞	85⅜	0	−1⅛	15.56
Finland, Rep. of 9½ 86	100	81¼	81¾	0	−0⅞	15.14
Ford Credit O/S 14⅝ 83	150	96¾	97¼	−0⅛	−2⅛	15.99
Ford Cr. O/S Fin. 16 84	150	99⅛	99⅝	−2⅛	−3⅛	16.21
Gaz de France 13½ 86	80	96⅛	96⅝	−0⅛	−1½	14.56
GMAC O/S Fin. 12 87	100	87⅜	87⅞	−0⅛	−1⅛	15.03
GMAC O/S Fin. 12⅞ 88	100	90⅛	90⅝	−0⅛	−1⅛	15.21
Gen. Mtrs. O/S 11¾ 87	100	86⅝	87⅛	−0⅛	−2	15.01
Genstar 14⅝ 91	50	97¼	97¾	+0⅛	−0⅛	15.25
GTE Fin 13¾ 86 (WW)	50	97	97½	−0⅛	−1⅛	14.54
Hudson's Bay 11½ 90	75	82⅜	82⅞	−0⅛	−3¼	15.11
IBM Wld.-Trade 12½ 88	200	93⅛	93⅝	−0⅛	−2⅛	14.04
Newfoundland 13½ 90	60	92¼	92¾	−0⅛	−3⅛	15.06
Nova Scotia 10⅜ 90	50	79⅞	80⅜	+0⅛	−1⅛	14.81
OKB 10 85	50	85⅜	85⅞	−0⅛	−1⅞	14.77
Ontario Hydro 13½ 91	100	92¾	93¼	−0⅛	−2½	14.87
Quebec Hydro 11½ 92	100	81	81½	−1⅛	−3	15.05
Queb. Hy. 13 91 (WW)	100	90⅝	91⅛	+0⅛	−1½	14.79
Royfease 11⅛ 85	50	88⅞	89⅜	−0¼	−1⅛	14.92
SNCF 12⅞ 85	50	93½	94	0	−1⅛	14.50
SNCF 13 91	75	91¾	92¼	0	−1¼	14.55
Sth. California Ed. 14 87	50	96⅜	96⅞	0	−1	14.88
Sven. Handelsbk. 13¾ 88	45	94⅛	94⅝	+0¼	−1⅛	15.10
Sweden 12⅜ 85	150	91¼	91¾	0	−2⅛	15.09
Swed. Ex. Credit 12 83	50	93¾	94¼	0	−0⅞	15.01
Swed. Ex. Credit 13 88	75	91¾	92¼	0	−2⅛	15.45
Tribune O/S Fin. 14 86	50	96½	97	0	−1½	14.95
World Bank 9⅜ 85	200	85⅝	86⅛	0	−1⅛	14.49
World Bank 10⅛ 87	300	82⅜	82⅞	0	−1⅞	14.64

Average price changes... On day −0⅛ on week −1⅛

DEUTSCHE MARK STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Asian Dev. Bk. 8⅜ 90	100	90½	91	−0⅛	−0⅜	9.93
Australia 8⅜ 90	250	95⅛	95⅝	−0⅛	+0⅛	8.89
Austria, Rep. of 8¾ 92	150	89	89½	−0⅛	0	9.82
CECA 7⅞ 92	150	87⅞	88⅜	+0⅛	+0½	9.61
CECA 10 91	120	102½	103¼	+0¼	+0⅛	9.53
Cii-Honeywell 8½ 90	125	90⅜	90⅞	0	−1	9.98
EIB 8½ 90	200	91	91½	−0⅛	−0⅜	9.93
EIB 10½ 91	200	102½	103¼	+0⅛	+0⅜	10.02
ESCOM 9¾ 87	100	93⅝	94⅝	−0⅛	−0⅜	10.54
Iberduero SA 9 90	100	94⅝	95⅜	0	+1	9.83
Ind. Bk. Finland 8½ 90	50	89½	90⅛	−0¼	−0½	10.22
Int.-Amr. Dv. Bk. 10 91	100	99⅛	99⅞	−0⅛	−0½	10.07
Japan Air Lines 8⅛ 87	100	92⅞	93⅝	0	0	9.54
Japan Dev. Bank 7⅝ 87	100	89⅝	90⅜	−0⅛	−0¼	9.79
Kobe, City of 8 90	100	90⅝	91⅜	−0⅛	+0¼	9.60
Midland Int. Fin. 8½ 90	180	92⅝	93⅛	0	0	9.64
Nuclebras 9⅜ 88	100	91¼	92	−0⅛	+2⅞	11.45
OKB 8¾ 92	150	88¾	89½	0	−0⅜	9.89
Oslo, City of 8¾ 90	80	94⅞	95⅜	0	+0⅛	9.56
Venezuela, R. of 9¾ 90	150	94½	95½	0	0	10.57
World Bank 8 90	700	87⅝	88⅜	0	−0¼	10.04
World Bank 10 86	150	100⅝	101⅜	0	−1⅛	9.74
World Bank 10 90	200	100⅞	101⅜	−0⅛	−0⅛	9.78

Average price changes... On day 0 on week −0⅛

SWISS FRANC STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Austria, Rep. of 5⅞ 90	100	89¼	89½	+1⅛	−1⅛	6.96
BFCE 6½ 91	100	100	100¼	−0⅛	−0⅜	6.48
Bayer Int. Fin. 5¼ 92	100	91	91¼	−0⅛	0	6.36
Bergen, City of 6 90	50	93	93¼	−0⅞	−2⅞	7.05
Buhrm'-Tetterode 7 90	40	100¼	100½	−0¼	−1½	6.94
Copenhagen Tele 5¾ 90	60	90¼	90⅜	−0¼	−0⅜	7.17
Denmark 5¾ 90	80	†90	91	+0⅛	+0⅛	7.19
Dome Petroleum 5¾ 91	100	94⅝	94⅞	+0⅛	−0⅛	6.49
Elet. de France 5¼ 90	100	89	89⅝	+0⅛	−3½	6.85
Eurofima 5¼ 92	80	†98½	99½	+0¼	+0¼	5.87
F. G. H. Hypo. Bk. 6 90	50	†92½	93	−1½	−2	7.10
Finland, Rep. of 5⅞ 90	80	*88½	88¾	+0⅛	−2¼	7.35
Int.-Amer. Dev. 7 90	80	100	100¼	−0⅛	−0⅜	6.98
Japan Dev. Bank 5⅞ 90	100	94	94½	−0⅛	−1⅛	6.58
Jutland Tele. 5½ 90	50	87½	88	+0½	−2½	7.44
Mt. Blanc Tunnel 5½ 90	60	†90	90½	0	−2⅛	6.94
Nawag 5¾ 90	80	90½	91	−1⅛	−5⅛	7.15
Norges Komm. 4⅝ 91	100	82	82¼	−0⅛	−2	6.81
OKB 6 90	100	†94¼	94½	−0⅛	0	6.86
Oslo, City of 4½ 91	100	†80½	81	+0⅛	+0⅜	7.03
Oslo, City of 5⅞ 90	80	92⅛	92⅜	−0⅛	−0⅛	7.01
Philips Lamps 5⅞ 92	100	89¾	90	+0⅝	−1⅛	6.54
Sek.sui Pre. Hms. 6 90	80	96⅛	96½	0	0	6.53
Trade Dev. Fin. 6⅛ 90	50	†93	94	0	−2¼	7.09
Voest-Alpine 5⅜ 90	80	91⅛	91⅜	+1	−1⅛	7.01
World Bank 6 91	100	82⅝	82⅞	0	−1⅛	7.04

Average price changes... On day 0 on week −1⅛

YEN STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Australia 5.6 83	30	93	94	0	−0⅛	8.59
Australia 6½ 88	20	87⅛	88⅛	0	0	8.55
EIB 7⅝ 89	12	93½	94½	0	0	8.78
Finland 5.6 83	10	92½	93½	0	0	8.77
Finland 6.8 88	10	87⅝	88⅝	0	0	9.17
Finland, Rep. of 8⅜ 87	15	99	100	0	+0⅞	8.48

Average price changes... On day 0 on week +0⅛

OTHER STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Bell Canada 10¼ 86 CS	60	90½	91½	0	+0½	13.12
CIBC 13½ 85 CS	50	†94½	95¼	+0½	−2¼	15.27
CIBC 11½ 85 CS	60	90¼	91¼	0	0	14.54
Federal Dev. 11½ 90 CS	60	†83½	84½	0	−1¼	14.75
Fst. Can. Inv. 10 84 CS	50	†86⅝	87⅛	0	−1½	15.65
R. Bk. Canada 10 86 CS	40	91	92	−0½	−0⅜	12.35
Tordom Cpn. 13½ 85 CS	30	†95	95½	0	−2	15.09
Mt Bk. Dnmk. 9 91 EUA	25	90¼	91¼	0	+0⅛	10.45
SOFTE 8¾ 89 EUA	40	86½	87½	0	+1	10.73
U. Bk. Nrwy. 9½ 90 EUA	18	97	98¼	0	+0¼	9.91
Algemene Bk. 10¼ 86 Fl	60	96⅝	97⅛	0	−0½	11.06
Bk. Mees & H. 10 85 Fl	75	97	97½	0	0	10.81
Heineken NV 10 87 Fl	100	95⅛	95⅝	−0⅛	−0⅛	11.04
Nat. Nedrlndn. 10 88 Fl	60	95⅜	95⅞	0	+0⅛	10.93
Ned. Midd. Bk. 10 85 Fl	75	97½	98	−0⅛	−0⅜	10.63
Pierson 10¼ 86 Fl	50	96⅞	97⅜	0	−0½	11.03
Acro Paris 13⅛ 87 FFr	150	93¾	94¾	0	0	14.53
Charb'nages 13⅞ 85 FFr	400	98	99	−0¼	−0¼	14.27
CECA 14⅛ 86 FFr	150	99⅝	100⅝	0	−0⅛	14.20
EIB 14⅛ 88 FFr	300	98½	99½	0	+0⅛	14.32
Gaz de France 11 84 FFr	150	91½	92½	+0⅛	−0⅛	14.11
La Redoute 14⅛ 85 FFr	125	95⅛	96⅛	+0⅛	+0¼	15.61
OKB 14 86 FFr	400	98⅜	99⅜	−0⅛	0	14.22
Solvay et Cie 14¾ 86 FFr	200	102⅜	103⅜	0	+0⅛	13.67
Utd. Mex. Sts. 14 85 FFr	150	97	98	0	+0¼	14.82
Acona 14 85 £	20	96	96¾	0	+0¼	15.07
Beneficial 14½ 90 £	20	94	94½	0	+0⅞	15.38
BNP 13½ 91 £	15	95¾	96¼	−0⅛	−0⅜	14.25
CECA 13½ 88 £	20	96⅜	96⅞	−0⅛	0	14.21
Citicorp O/S 13½ 90 £	50	95⅞	96⅜	−0⅛	−0⅛	14.27
Fin. Exp. Cred. 13¾ 86 £	15	97¾	98¼	0	+0⅛	14.33
Gen. Elec. Co. 12½ 89 £	50	93½	94¼	−0⅛	+0⅜	13.78
Hiram Walker 14¼ 86 £	25	98	98½	+0⅛	+0⅞	14.76
Privatbanken 14½ 88 £	12	97	97½	0	+0⅛	15.16
Rothschild 14⅛ 90 £	12	97⅝	98⅛	0	+0⅜	14.64
Royal Trustco 14 86 £	12	99	99½	−0⅛	−0⅜	14.19
Swed. Ex. Cr. 13¾ 86 £	20	97¾	98¼	0	0	14.32
Banobras 8¾ 90 KD	7	†91½	92	0	0	9.66
CCCE 8⅜ 91 KD	10	†83¾	84¼	0	+1⅛	10.83
Sonatrach 8½ 90 KD	12	†94¾	95¼	0	+0⅜	9.35
Akzo 9¾ 87 LuxFr	500	85⅞	86⅞	0	+2¼	12.39
Euratom 9⅜ 88 LuxFr	500	89⅛	90⅛	+0½	+2¼	12.07
Eurofima 10½ 87 LuxFr	500	92¾	93¾	+0⅝	+4½	12.02
EIB 9¾ 88 LuxFr	600	90⅜	91⅜	+0⅛	+3⅛	11.76
Volvo 9¾ 87 LuxFr	500	85⅜	86⅜	−0⅛	+1⅛	12.87

FLOATING RATE NOTES	Spread	Bid	Offer	C.dte	C.cpn	C.yld
Allied Irish Bank 5¼ 87	0¼	99⅝	99⅞	2/7	16⅝	16.69
Bank of Montreal 5¼ 90	0¼	99⅝	99⅞	18/6	19½	19.57
Bank of Tokyo 5¼ 89	‡0¼	98⅝	99⅛	25/7	16½	16.69
BBL Int. 5 88	0¼	99	99½	20/5	16½	16.62
Bergen Bk. A/S 6 89	‡0¼	†99	99½	29/5	17⅛	17.25
BNP 5½ 88	‡0⅛	99¼	99¾	29/4	18.69	18.78
CNT 5¼ 86	§0¼	99¼	99¾	16/10	16.81	16.90
Christiania Bk. 6½ 91	‡0¼	97⅝	98⅛	5/6	17¾	18.14
Citicorp O/S F. 84	‡0	98⅞	99⅜	30/4	15.44	15.57
C. Itoh 5¼ 87	0¼	98¾	99¼	18/9	15.44	15.59
Co-operative Bk. 6 86	0¼	97½	98	15/5	15¼	15.60
Den Norske Credit 6 90	‡0⅛	98⅛	98⅝	5/6	17¾	18.02
Genfinance 5¼ 87	0¼	99¼	99¾	30/4	15⅛	15.20
Giro und Bank 5¼ 91	‡0¼	97½	98	23/6	14.06	14.39
GZB 5½ 89	‡0¼	98¾	99¼	1/5	17⅞	18.06
Ind. Bank Japan 5¼ 87	0¼	99⅜	99⅞	15/10	17.06	17.13
Ind. Bank Japan 5¼ 88	0¼	99	99½	9/10	16.44	16.56
Lloyds Eurofin 8 90 £	0¼	96⅞	97⅜	3/7	14½	14.93
Lloyds Eurofin 5¼ 92	0¼	98¼	98¾	4/6	17¼	17.51
LTCB Japan 5¼ 86	0¼	99⅞	100⅛	13/6	20.19	20.15
Man. Hanov. O/S 5¼ 94	‡0⅛	98½	99	30/5	17	17.22
Midland Intl. Fin. 5¼ 92	0¼	98⅜	98⅞	6/6	17.19	17.43
Nacional Fin. 6¼ 85	0¼	99⅜	99⅞	25/7	17¾	17.82
Nacional Fin. 5½ 88	0⅛	97⅜	97⅞	25/9	14⅞	15.24
Nat. Bk. Canada 5¼ 88	0¼	97⅝	98⅛	24/9	14½	14.80
Nat. West. 5¼ 94	§0⅛	97¾	98¼	14/10	16.19	16.52
Nat. West. 5¼ 92	§0⅛	98	98½	23/10	16.81	17.11
Pemex 6 91	0⅝	97½	98	9/10	15.31	15.66
Sparebanken 6 87	0¼	99¼	99¾	19/6	19⅞	19.97
Standard Chart. 5¼ 90	0¼	99⅜	99⅞	3/9	17.06	17.13
Svenska Hndlsbk. 5 87	0⅛	99½	100	15/7	17.81	17.86

Average price changes... On day 0 on week −0⅛

CONVERTIBLE BONDS	Cnv. date	Cnv. price	Bid	Offer	Chg. day	Prem
Bow Valley Inv. 8 95	4/81	23.12	98	99¼	−0⅛	35.34
Canon 6¾ 95	1/81	829	131⅛	132⅛	−0⅞	0.22
Credit Suisse 4½ 93	10/79	1238	92½	94½	0	−1.94
Digicon Fin. 8½ 95	10/81	29.5	104⅝	105¼	−0½	3.74
Ina Overseas 8⅛ 2000	4/81	42	108⅛	109⅛	+0⅛	−1.82
Inchape Ltd. 8 95	2/81	4.55	95½	96½	+0½	2.03
Jacca 7½ 95	11/80	565	115¼	116¼	+2¼	10.92
Kotobukiya Co. 7 96	4/81	619	99	100	0	−4.44
Marion Int. Fin. 9 95	12/80	15.5	84½	85¼	0	33.55
Matsushita El. 7½ 95	11/80	590	109¼	110¼	−1⅛	−4.03
MEPC 8¼ 96	2/81	2.47	100½	101¼	+0⅛	13.46
Niigata Eng. 7½ 96	1/81	327	100¼	101¼	+0½	15.62
Nissho-Iwai Co. 8 96	10/80	398	78	79½	−0¼	−0.19
Ricoh 6⅛ 95	8/80	604	119⅞	120⅞	+0⅛	2.35
Sumitomo M. Ind. 7 95	2/81	181	123¼	124¼	−0⅛	1.32
Swiss Bk. Cpn. 6¾ 90	9/80	200	79	81	0	22.09
Taylor Woodrow 8⅜ 90	1/81	4.94	109	110½	+0½	0.44
Tokyu Land Cpn. 7⅛ 96	4/81	325	102	103	−0¼	0.78
Transco Int. 8¾ 95	2/81	68	84⅞	85⅜	+0⅜	35.21
Tricorp 8½ 95	12/80	31.25	88¼	89½	−1½	39.74
Union Bk. Switz. 5 89	2/80	121.4	78	80	0	−9.47
Fujitsu 5 84 DM	7/79	431.5	154⅞	155⅞	+3¼	0.14
Sharp Cpn. 6½ 88 DM	9/80	595	160½	161½	+1	−0.30
Uny Co. 3½ 85 DM	11/79	879.3	106⅜	107⅜	−0¼	−0.66

EUROBOND TURNOVER
(nominal value in $m)

	Cedel	Euro-clear
U.S. $ bonds		
Last week	1,185.2	2,521.3
Previous week	1,674.2	3,280.5
Other bonds		
Last week	402.8	261.1
Previous week	428.0	829.8

* No information available—previous day's price.

† Only one market maker supplied a price.

STRAIGHT BONDS: The yield is the yield to redemption of the mid-price; the amount issued is in millions of currency units except for Yen bonds where it is in billions. Change on week= Change over price a week earlier.

FLOATING RATE NOTES: Denominated in dollars unless otherwise indicated. Coupon shown is minimum. C.dte=Date next coupon becomes effective. Spread=Margin above six-month offered rate (‡ three-month; § above mean rate) for U.S. dollars. C.cpn = The current coupon. C.yld=The current yield.

CONVERTIBLE BONDS: Denominated in dollars unless otherwise indicated. Chg. day= Change on day. Cnv. date=First date for conversion into shares. Cnv. price=Nominal amount of bond per share expressed in currency of share at conversion rate fixed at issue. Prem=Percentage premium of the current effective price of acquiring shares via the bond over the most recent price of the shares.

The list shows the 200 latest international bonds for which an adequate secondary market exists. The prices over the past week were supplied by: Arab Company for Trading Securities SAK; Kredietbank NV; Credit Commercial de France; Credit Lyonnais; Commerzbank AG; Deutsche Bank AG; Westdeutsche Landesbank Girozentrale; Banque Generale du Luxembourg SA; Banque Internationale Luxembourg; Kredietbank Luxembourg; Algemene Bank Nederland NV; Pierson, Heldring and Pierson; Credit Suisse/Swiss Credit Bank; Union Bank of Switzerland; Akroyd and Smithers; Bankers Trust International; Credit Commercial de France (Securities) London; Citicorp International Bank; Daiwa Europe NV; Deltec Trading Company; EBC; First Chicago; Goldman Sachs International Corporation; Hambros Bank; IBJ International; Kidder Peabody International; Manufacturers Hanover; Merrill Lynch; Morgan Stanley International; Nikko Securities Company (Europe); Orion Bank; Salomon Brothers International; Samuel Montagu and Co.; Scandinavian Bank; Societe Generale Strauss Turnbull; Sumitomo Finance International; S. G. Warburg and Co.; Wood Gundy.

Closing prices on April 24

A copy of this Prospectus, having attached thereto the documents specified below, has been delivered to the Registrar of Companies in London for registration.

Application has been made to the Council of The Stock Exchange for admission to the Official List of the Shares of US $5 each of Energy Resources & Services Incorporated ("ERS") now being issued.

This document includes particulars given in compliance with the Regulations of the Council of The Stock Exchange for the purpose of giving information with regard to ERS. The Directors have taken all reasonable care to ensure that the facts stated herein are true and accurate in all material respects and that there are no other material facts the omission of which would make misleading any statement herein whether of fact or of opinion. All the Directors accept responsibility accordingly.

No person receiving a copy of this Prospectus and/or an Application Form in any territory other than the United Kingdom may treat the same as constituting an invitation to him, nor should he in any event use such Application Form, unless in the relevant territory such an invitation could lawfully be made to him and such Form could lawfully be used without compliance with any registration or other legal requirements. It is the responsibility of any person outside the United Kingdom wishing to make an application hereunder to satisfy himself as to full observance of the laws of the relevant territory in connection therewith, including obtaining any governmental or other consents which may be required or observing any other formalities needing to be observed in such territory.

The Subscription List for the 5,000,000 Shares now being offered will open at 10 a.m. on 30th April, 1981 and may be closed at any time thereafter.

The procedure for application is set out at the end of this Prospectus.

Offer for Subscription
by
ENERGY RESOURCES & SERVICES INCORPORATED

(Incorporated with limited liability in Panama under Law Number 32 of 1927)

of 5,000,000 Shares of US $5 each for subscription at US $10 per share, or at £4.75 per share to satisfy in full an issue price of US $10 per share, payable in full on application

Authorised US $	**Share Capital**	*To be issued (fully paid)* US $
25,000,000	in 5,000,000 Shares of US $5 each	25,000,000

Such Shares will upon issue rank in full for all dividends and other distributions hereafter declared, made or paid on the share capital of ERS.

The Directors of ERS have been informed that applications will be made for 3,750,000 Shares by clients of John Govett & Co. Limited and Ferrier Lullin Bank & Trust (Bahamas) Limited ("FLBT") and of Cazenove & Co., the brokers to the issue, which will be allotted in full. The balance of the issue has been underwritten.

INDEBTEDNESS

ERS has no loan capital (including term loans) outstanding or created but unissued, and no outstanding mortgages, charges or other borrowings or indebtedness in the nature of borrowings including bank overdrafts and liabilities under acceptances or acceptance credits, hire purchase commitments, or guarantees or other material contingent liabilities.

Directors

JEAN-PIERRE JEQUIER
(President) (*Swiss*)
1249 Dardagny,
Switzerland.

MICHEL ALEXANDRE (*French*)
2 Rue de la Tourelle,
92100 Boulogne, France.

JOHN PICKENS HARBIN (*U.S. Citizen*)
2600 Southland Centre,
Dallas 75201, U.S.A.

JOHN MICHAEL PIERCE (*Canadian*)
330 Fifth Avenue S.W.,
Calgary, Alberta, T2P OL4.

WILLIAM JOHN ROMAINE GOVETT
(*Vice-President*) (*British*)
50, Chelsea Square,
London SW3 6LH.

MARK RALPH CORNWALL-JONES (*British*)
3, Albert Bridge Road,
London SW11 4PX.

The Hon. DWIGHT WILLIAM MAKINS (*British*)
51, Ennismore Gardens,
London SW7 1AH.

JEAN-LOUIS SUNIER (*Swiss*)
5, Chemin des Buclines,
1224, Chêne-Bougeries,
Geneva, Switzerland.

Managers
E.R.S. MANAGEMENT INCORPORATED,
P.O. Box 029,
Panama 5,
Republic of Panama.

Investment Advisers
JOHN GOVETT & CO. LIMITED,
Winchester House,
77 London Wall,
London EC2N 1DH.

FERRIER LULLIN ET CIE S.A.,
15 Rue Petitot,
1204 Geneva,
Switzerland.

Stockbrokers
CAZENOVE & CO.,
12 Tokenhouse Yard,
London EC2R 7AN.

Bankers
FERRIER LULLIN BANK & TRUST
(BAHAMAS) LIMITED,
Frederick House, Frederick Street,
P.O. Box N–4890, Nassau, Bahamas.

Auditors and Reporting Accountants
COOPERS & LYBRAND, *Chartered Accountants,*
P.O. Box N–596, Charlotte House,
Charlotte Street, Nassau, Bahamas.

Registrars and Transfer Office
NATIONAL WESTMINSTER GUERNSEY
TRUST COMPANY LIMITED,
35 High Street, St. Peter Port,
Guernsey, Channel Islands.

Receiving Bankers
NATIONAL WESTMINSTER BANK LIMITED,
New Issues Department,
P.O. Box 79, Drapers Gardens,
12 Throgmorton Avenue, London EC2P 2BD.

Legal Advisers

In England
LINKLATERS & PAINES,
Barrington House,
59/67 Gresham Street,
London EC2V 7JA.

In the Bahamas
CARSON, LAWSON, KLONARIS,
SAWYER & KNOWLES,
P.O. Box N–4645,
Charlotte House, Charlotte Street,
Nassau, Bahamas.

In Panama
AROSEMENA, NORIEGA & CASTRO,
Banco do Brasil Building,
Elvira Mendez Street 10, Panama,
Republic of Panama.

INTRODUCTION

ERS, which is incorporated in Panama, has been formed under the auspices of John Govett & Co. Limited ("John Govett") and Ferrier Lullin et Cie S.A. ("Ferrier Lullin") with the intention of providing investors with a vehicle for investment in energy and energy-related fields. Whilst the funds of ERS will be invested mainly in listed securities, it is intended that a proportion will be invested directly in actual and prospective energy-producing properties. The Directors of ERS believe that the investment prospects for the sector are favourable and *that many investment opportunities will arise due to the strategic importance of energy and* its fundamental position in the world economy. As described below under "Investment Policy", emphasis will be given to investment in the United States where it is anticipated that economic and other factors will operate particularly to the advantage of companies whose activities are connected directly or indirectly with energy.

ERS has been constructed as a company with a seven-year life with the opportunity to extend its life by a decision of the holders of more than half of the issued Shares after the initial seven year period. The By-laws of ERS therefore provide that ERS will be dissolved after seven years unless at a General Meeting of ERS held at that time it is resolved to continue for a further three years. Similar provisions for dissolution come into effect at each three yearly interval after the first and any subsequent decision to continue ERS. On dissolution it is intended that amounts equal in aggregate to net asset value less realisation expenses will be distributed to Shareholders.

The Directors of ERS believe that these provisions and the power of ERS to purchase its own *Shares in the market (both described in more detail under "Duration of ERS" and* "Purchase of Shares to be held in Treasury" below) will assist in minimising or eliminating the discount to net asset value which is a common feature of the market value of the shares of many closed-end investment companies.

DIRECTORS

J-P. Jequier, aged 62, the President of ERS, is the Vice-Chairman of the Board of Ferrier Lullin and is also a Director of Sogener S.A., a company investing directly in energy-producing interests, and of Compagnie Royale Asturienne des Mines.

W. J. R. Govett, aged 43, the Vice-President of ERS, has been Chairman of John Govett since 1976 and has been an investment manager for 20 years. He is a Director of Legal & General Group Limited and a number of listed investment companies.

M. Alexandre, aged 52, is the General Manager of Banque Odier, Bungener, Courvoisier, a private French bank which specialises in the provision of investment management services *to institutions and private individuals.*

M. R. Cornwall-Jones, aged 48, is Deputy Chairman of John Govett and has been an investment manager since 1959. He is a Director of Halifax Building Society, Courage Limited and Crusader Insurance Company Limited and was a Deputy Chairman of The Association of Investment Trust Companies between 1977 and 1979.

J. P. Harbin, aged 64, is Chairman of the Board, President and Chief Executive Officer of Halliburton Company, which is one of the world's largest and most diversified oil field services and engineering/construction organisations. Mr. Harbin joined the Board of Halliburton in 1962. He is also a Director of Citicorp, in addition to other directorships connected with research in the petroleum industry.

The Hon. D. W. Makins, aged 30, is an investment manager and has been a Director of John Govett since 1978. He is also a Director of Tesel Services Limited, an unlisted company which provides well logging services in Europe.

J. M. Pierce, aged 57, is Chairman and President of Ranger Oil Limited ("Ranger") a *Canadian oil & gas company,* and a director of London and Scottish Marine Oil Company Limited ("LSMO") a United Kingdom oil company. He has worked in the oil and gas industry for some 33 years, and has extensive experience of oil and gas exploration, particularly in North America and in the North Sea, where Ranger and LSMO act as operators and where both have interests in the Ninian field.

J-L. *Sunier, aged 49, has been a Senior Vice-President of Swiss Bank Corporation,* Geneva since 1977. He is the head of that Bank's portfolio management department and is also a Director of several investment companies.

MANAGEMENT

ERS has, under an agreement with E.R.S. Management Incorporated ("Management"), details of which are set out in paragraph 2 (i) of Appendix 2, (the "Management Agreement") delegated the day to day management of its affairs and the provision of administrative and accounting services to Management, a company incorporated with limited liability in Panama *and jointly owned by wholly-owned Bahamian subsidiaries of John Govett and Ferrier Lullin.* Management in turn has agreed that a substantial part of the services to be provided by it to ERS under the Management Agreement will be carried out by FLBT, one of its two shareholders. FLBT has in turn appointed John Govett to provide certain accounting services to it in relation to the affairs of ERS.

INVESTMENT ADVISERS

ERS has, under an agreement with Management, John Govett and Ferrier Lullin, details of which are set out in paragraph 2 (ii) of Appendix 2, arranged that the funds which it will *hold for investment will receive the benefit of the investment advisory experience in the energy* sector of both John Govett and Ferrier Lullin.

John Govett, a private company incorporated in England, operates as investment managers and advisers in the United Kingdom and manages four listed investment trust companies, five unit trusts and a number of pension funds and private client accounts. Most of these funds have a wide geographical spread of investments and in recent years a number of them have invested a substantial proportion of their assets in the energy and energy-related sectors, principally in North America. John Govett acted as manager to London & Aberdeen Investment Trust Limited. This was a listed investment trust company which, as part of its *liquidation in 1977, sold for U.S. $25.6 million its subsidiary,* The Texas Land & Mortgage Company, Inc., which owned oil and gas exploration and development properties in North America.

Ferrier Lullin carries on one of the oldest banking businesses (started in 1795) in Switzerland. Its predominant activity is the management of investments for private and institutional clients. In 1978, Swiss Bank Corporation acquired a 60 per cent. interest in Ferrier Lullin with a consequential increase in the opportunities available to Ferrier Lullin to expand the scale of its activities. In recent years, Ferrier Lullin has paid particular attention in its investment policy to the energy sectors and it maintains close relations with a number of oil and gas specialists. As a result Ferrier Lullin has made a number of substantial and successful investments in, and has experience of, these sectors in several countries.

INVESTMENT BACKGROUND

Since 1973 the price of all forms of energy has risen steeply and at a rate in excess of the general level of price inflation in the Western world as a result of producers attempting both to increase revenue and conserve resources. Consequently the availability of energy supplies has been recognised as a continuing problem and efforts are being directed towards securing sufficient supplies to meet expected demand. These factors have produced a much increased level of exploration and development activity in the energy field in recent years, *and a further increase has resulted from the continuing uncertainty in the Middle East.*

The higher prices prevailing for both oil and gas have led to the profitable development of fields which would not have been commercially viable at lower prices, and also to a higher level of exploration being undertaken. In many cases cash flow from production of existing reserves has assisted in financing further exploration and development; where small and *medium sized companies have found cash flow insufficient, their need for outside financing* has in some cases presented opportunities for investors to participate directly in drilling programmes as well as to provide equity capital.

It has become increasingly difficult for the larger established oil companies to replace their existing reserves with discoveries of exploitable oil and gas in sufficient quantities. This has contributed to the recent diversification by such companies out of energy exploration and production into related areas, such as minerals and natural resources. Opportunities are available for the involvement of the smaller oil companies in the development of less significant discoveries, which current price levels make profitable and whose size is commensurate with the scale of operations of these smaller companies.

In the United States of America, internal regulations, which depressed domestic energy prices to a level below those prevailing elsewhere in the world, have been repealed gradually as the disparity between energy prices in the United States and elsewhere has increased. Price controls on U.S.-produced crude oils ended on 28th January, 1981 and the price of natural gas is being deregulated in stages up to 1st January, 1985. This has resulted in a substantial increase in the value of indigenous reserves and hence exploration of both previously unexplored land and areas already identified as oil bearing has gathered momentum.

In many countries governments have attempted to regulate domestic prices or to levy a windfall profits tax on oil and gas revenues; in the United States however the recognition of the need for a profitable energy sector to finance continuing exploration has led to a smaller burden of tax being placed at present on producing companies than in some other countries.

The increase in exploration, development and production activity has had a beneficial impact on the level of orders placed with companies supplying both goods and services *to the energy industries. These range from companies conducting geophysical surveys at* the early stages of exploration to those operating service barges supplying offshore oil rigs, and include offshore and onshore contract drilling, equipment manufacture, well logging and stimulation and cementing. In order to meet the demands of an expanding market, many companies have introduced competitive improvements in technology and new methods of *operation so as to reduce planning and drilling time and improve extraction rates and recovery.* Enhanced recovery techniques, which upgrade recoverable reserves, can bring substantial benefits, especially in fields at the end of their conventional production life, and are therefore much in demand. Despite competition, the profitability of those companies successfully introducing improved technology in the oil service industry has largely been maintained.

Higher oil prices have stimulated fresh research in synthetic fuel technologies and the further development of other sources of natural fuels, such as coal and uranium. South Africa has already had considerable success in this field with around one-third of its oil requirements coming from the liquefaction of coal. In Australia coal production has substantially increased and major projects have been proposed to mine its large reserves of uranium ore. Other *countries, notably the United States, are making strong advances in the development of* synthetic fuels, nuclear, solar and geothermal power.

The effects of the rising price of oil and gas in real terms have been apparent throughout the energy industry. The Directors of ERS believe that, with continuing pressure on supplies of oil and gas, prices will continue to rise in real terms and exploration and development activity therefore will be maintained at a high level for the forseeable future.

INVESTMENT POLICY

Against this background it is foreseen that there will be considerable opportunities for ERS worldwide. Attention will be given to investing in smaller energy and energy-related *companies which appear to offer enhanced potential for capital growth.*

ERS proposes to have four main areas of investment:—

1. **Oil and gas exploration and producing companies**
   The Directors of ERS intend to invest in oil and gas producing companies with emphasis on those companies which also possess a substantial exploration acreage. They will concentrate on investment in companies operating in North America but will also look to the Far East (including Australia) and Europe.
   Many small to medium sized companies, particularly in the United States, appear to be valued on their proven reserves without reflecting the full potential of the exploration prospects of their undeveloped acreages. Whilst the investment risks are greater, a discovery by such a company can have a greater impact on its market valuation.
   For many of the reasons outlined in "Investment Background", smaller oil and gas companies in the United States hold a unique position at present with a number of factors operating to their advantage. The areas of previously undeveloped land in the United States are very large and the potential for on-shore oil discovery and production in these areas has now been recognised. Prospects for those companies operating on-shore in the United States with an element of proven reserves have been enhanced by the deregulation of oil and gas prices. Enhanced prospects also exist for those companies operating in areas where there is a good pipeline network which, together with the improved techniques for extraction, considerably shortens the lead time between discovery and production, with consequent savings in finance costs. The Directors of ERS intend to obtain an interest in a number of such companies so as to take advantage of their relative attraction.
2. **The oil service industry**
   The prosperity of the oil service industry depends heavily upon the level of demand from the oil and gas companies. Whilst it is beneficial to the industry that it does not have the financial exposure to the success rate of wells drilled, the size of the market which it serves does ultimately depend upon the commercial viability of exploration activity and the profitability of oil companies. Over the next five years at least, the demand for its products and services is expected to remain at the current high level, and should be further stimulated by the need to develop new skills.
   Investment attention will be directed towards companies with a technological lead, such as those engaged in providing accurate information on the drilling process and the services needed for drilling at exceptional depths and under adverse conditions, as these companies are expected to show growth well above average for the sector. Many opportunities exist for investment, both in companies operating in the United States, which presently dominate the industry, and in fledgling companies outside that country.
3. ***Alternative sources of energy***
   The Directors of ERS propose to make investments in companies specialising in exploiting alternative sources of energy worldwide, particularly in those countries which do not possess their own oil and gas reserves. The Directors of ERS will also monitor the progress of companies involved in the development of synthetic fuels and of nuclear, solar and geothermal power.
4. **Direct interests in oil and gas development or producing properties.**
   The Directors of ERS intend to take interests in oil and gas development or producing properties, which are most likely to be situated in North America, both by direct participation in the properties and through specialist drilling funds. ERS will receive expert advice in evaluating the prospects and the method of participation and it is not expected that it will take direct interests in properties at the exploration stage only.

It is proposed that some investment will be made in certain unlisted companies in the areas outlined above. In accordance with the requirements of The Stock Exchange in London, it will be part of the investment policy of ERS (i) that not more than 10 per cent. of its assets (before deducting borrowed money) may be lent to, or invested in the securities of, any one company (including loans to and shares in its own subsidiaries); and (ii) that not more than 15 per cent. of the assets of ERS (before deducting borrowed money) may be invested *in:—*

(a) holdings in which the interest of ERS exceeds 20 per cent. of the aggregate of the equity capital (including any capital having an element of equity) of any one listed company; and

(b) securities not listed on any recognised stock exchange and the direct interests *referred to in 4 above.*

ERS has secured the services as Directors of Mr. J. P. Harbin and Mr. J. M. Pierce, who are well known and actively engaged in the oil industry. Their involvement will be of great assistance in assessing the opportunities available for investment in any part of the world and this, together with the experience in the energy field of ERS's two investment advisers, *will sustain the direction for investment policy.*

Although ERS is empowered to borrow funds (see paragraph 1 (d) of Appendix 1) there is no present intention to undertake any such borrowings other than for short-term purposes; the Directors of ERS will, however, keep the desirability of so doing under review.

DURATION OF ERS

The By-laws of ERS provide for an Extraordinary General Meeting to be held in or about May 1988 at which Shareholders will be asked to decide if they wish ERS to continue in existence. Unless the holders of more than 50 per cent. of the Shares of ERS then in issue (other than any Shares held in Treasury) consent to such continuation, *ERS will be dissolved.*

If ERS is not to continue, the Directors of ERS will immediately take steps to dissolve ERS by realising its investments and distributing its net assets, after provision for liabilities and realisation costs. It is intended that the greater part of the net asset value will be distributed to Shareholders within one month of the dissolution commencing.

If ERS is to continue, the By-laws provide those *Shareholders who wish to do so with* an opportunity to realise all or part of their investment at near break-up valuation. In this case ERS will (subject to the limitation on the power to purchase Shares imposed by Panamanian law and summarised in paragraph 2 (b) of Appendix 1), during the period of one month following the seventh business day after the date of the Extraordinary General Meeting, purchase all Shares offered through the market at *any price not exceeding 95 per* cent. of attributable net asset value, as determined from time to time by the Directors of ERS during such period, up to a limit of 25 per cent. of the total number of Shares (including any held in Treasury) in issue immediately before the date of such Meeting. Any Shares so purchased will be held in Treasury.

If ERS is not dissolved in 1988, Shareholders will be able to vote on its further continuance in or about May 1991, and every three years thereafter, at Extraordinary General Meetings convened for that purpose. ERS will be dissolved immediately after the first of these Extraordinary General Meetings at which consent to its continued existence is not given. So long as ERS continues, its obligation every three years to purchase Shares on the same basis and during a similar period as described above will continue, save that this obligation will cease when the number of Shares held in Treasury equals 50 per cent. of the total number of Shares (including any held in Treasury) in issue immediately before the date of the relevant Meeting.

A summary of the relevant provisions of the By-laws of ERS *is set out in paragraph 1 of* Appendix 1.

PURCHASE OF SHARES TO BE HELD IN TREASURY

Subject to the limitation referred to below and the provisions of Panamanian law, the Directors of ERS are empowered throughout the life of ERS to purchase Shares in the market or by tender at any price. Any Shares so purchased will be held in Treasury. The Directors of ERS may not do so in any circumstances where the effect of the transaction after expenses would be to reduce the net asset value per Share.

This power will lapse if and so long as the number of Shares held in Treasury equals at any time during the period up to May 1988 25 per cent. of the total number of issued Shares, or thereafter, if ERS is not dissolved following the Extraordinary General Meeting to be held in or about May 1988, 50 per cent. of the total number of issued Shares.

The Directors of ERS may also sell Shares held in Treasury through the market or by tender at any price and at any time but may not do so in any circumstances where the effect of the transaction after expenses would be to reduce the net asset value per Share.

Subject to the restriction on purchases and sales of Shares which would reduce net asset value per Share outlined above, Shares may not be purchased or sold for Treasury by private treaty at prices per Share in excess of or less than, respectively, the middle market quotation therefor (based upon The Stock Exchange Daily Official List) on the business day prior to such purchase or sale.

Shares for the time being held in Treasury will not carry any entitlement to attend or vote at General Meetings or to receive dividends.

Summaries of the relevant provisions of the By-laws of ERS and of Panamanian law are set out in paragraphs 1 and 2 respectively of Appendix 1.

هكذا بالأصل

APPOINTMENTS

Senior post at Amoco Europe

Mr. J. C. Burton, former vice-president, production, for Amoco International Oil Company, Chicago, has been named president of AMOCO EUROPE INC., London. He replaces Mr. S. A. Antoniuk who is transferred to Amoco Production Company, a wholly-owned subsidiary of Standard Oil Company (Indiana) as vice-president exploration (U.S.A.) based in Chicago. Three Amoco Europe managers have been named vice-presidents: Mr. R. L. Young becomes vice-president, production, Mr. K. A. Shepard is made vice-president, exploration, and Mr. G. R. Taylor becomes vice-president, administration and economics. In addition, Mr. D. E. Wilson has been appointed vice-president, finance.

★

Sir John Cuckney has joined the Board of JOHN BROWN AND CO.

★

Mr. Colin Tranter has been appointed director and general manager of the foundries division of JONES AND ATTWOOD.

★

H. J. HEINZ COMPANY has made two promotions. **Mr. R. Derek Finlay** will report to the company's world headquarters in Pittsburgh on July 1 as a senior vice-president. On *September 1*, he will assume the further title of senior vice-president—corporate development, replacing Mr. Donald C. McVay, who will retire. **Mr. Richard L. Beattie**, currently president and chief executive officer of The Hubinger Company, a Heinz subsidiary in Keokuk, Iowa, will replace Mr. Finlay as managing director of H. J. Heinz Company Ltd., headquartered in Hayes Park, Middlesex on June 1. Before joining Heinz in 1979, Mr. Finlay was a consultant with McKinsey and Company for 18 years.

★

Mr. Piero Hummel, chairman of the managing committee of BROWN BOVERI, has been elected to the Board of SWISS ALUMINIUM, Zurich. He replaces **Mr. *Fritz Gerber***, *chairman* of F. Hoffmann-La Roche, Basle, and of Zurich Insurance Company, who has resigned from the Swiss Aluminium Board.

★

Mr. E. D. Wilson, president, chief executive officer, and chairman of the board of SEISMOGRAPH SERVICE CORPORATION, Tulka, a Raytheon subsidiary, died on March 11. **Mr. R. C. Anderson** has been elected president and chief executive officer to succeed Mr. Wilson.

★

Mr. Warren R. Stumpe has been named vice-president—business development sector at REXNORD, Milwaukee.

★

Mr. Alex Carmichael has been appointed chairman of SANTOS, the Australian energy producer. This follows the retirement of **Mr. John Bonython** who has been chairman of the company since *its formation in 1954*. **Mr. *Alan* Bond** becomes deputy chairman, and **Sir Lenox Hewitt** has accepted an invitation to the Santos Board filling the casual vacancy created by Mr. Bonython's retirement.

★

Tunku Dato' Ahmad Yahaya, joint Group chief executive of Sime Darby Berhad, has been appointed to the boards of CONSOLIDATED PLANTATIONS BERHAD and KEMPAS (MALAYA) BERHAD, the two plantation subsidiaries of the Group.

★

Mr. Harvey Dondero has been appointed managing director of the JOHNSON BROTHERS tableware manufacturing division of Wedgwood at Croydon, near Melbourne, Australia. He succeeds **Mr. Stephen B. Johnson** who will retire in August. At present a director of Josiah Wedgwod and Sons Inc of America, Mr. Dondero has been vice-president of operations since June 1977 in charge of the Lyndhurst (New Jersey) distribution centre.

★

Mr. Graham Ferguson Lacey, chairman and chief executive of NCC Energy, has been appointed chairman of the executive committee of SIMPLICITY and a director. Also appointed to the executive committee and as a director of Simplicity is NCC Energy Inc.'s president **Mr. Enrique G. Gittes**. **Mr. Alan Dodd**, NCC's finance director, has also joined the Board.

★

Mr. David Nicholls has been appointed vice president and general manager of BAYSIDE MANAGEMENT COMPANY, Hamilton, Bermuda, a wholly-owned subsidiary of Reinsurance Facilities Corporation.

★

M. Claude Mandray, the managing director of the Port Autonome de Rouen, has been appointed Managing director of the ASSOCIATION TECHNIQUE de l'IMPORTATION CHARBONNIERE. This organisation is the largest buyer of coal in the world purchasing some 25m tonnes per year. **M. Alain Gauthier** has been appointed as his successor.

WORLD STOCK MARKETS

NEW YORK | CANADA | HOLLAND | HONG KONG | JAPAN | ITALY | NORWAY | SWEDEN | SWITZERLAND | GERMANY | AUSTRALIA | SINGAPORE | SOUTH AFRICA | BRAZIL | AUSTRIA | BELGIUM/LUXEMBOURG | FRANCE | DENMARK

[illegible]

Financial Rand US$0.891 (Discount of 27¼%)

Indices

NEW YORK —DOW JONES

	Apr. 24	Apr. 23	Apr. 22	Apr. 21	April 20	Apr. 16	1981 High	1981 Low	Since Cmpil't'n High	Since Cmpil't'n Low
•Industr'ls	1020.55	1010.27	1007.02	1005.9	1015.94	1005.53	1020.55 (24/4)	931.57 (16/2)	1051.70 (11/1/73)	41.22 (2/7/32)
H'me B'nds	60.52	60.00	60.99	60.26	61.14	60.94	65.78 (15/1)	60.00 (23/4)	—	—
Transport.	441.66	440.85	443.20	439.02	444.64	447.38	447.38 (16/4)	379.12 (20/2)	447.38 (16/4/81)	12.23 (8/7/32)
Utilities	106.47	106.47	106.54	107.09	107.24	107.16	117.81 (6/1)	105.34 (14/4)	163.32 (20/4/69)	10.5 (28/4/42)
Trading Vo 000's	60,000	64,200	60,660	60,280	51,020	52,950	—	—	—	—

•Day's high 1024.68. low 1004.32

	Apr. 20	Apr. 10	Apr. 3	Year ago (approx
Ind. div. yield %	5.51	5.54	5.50	6.30

STANDARD AND POORS

	Apr. 24	Apr. 23	Apr. 22	Apr. 21	April 20	Apr. 16	1981 High	1981 Low	Since Cmpil't'n High	Since Cmpil't'n Low
‡Indust'ls	153.07	151.65	151.91	152.04	154.34	152.52	157.02 (6/1)	145.75 (2/2)	160.96 (28/11/80)	3.52 (30/6/32
Composite	135.14	135.84	134.14	134.23	136.26	134.70	138.12 (6/1)	128.58 (20/2)	140.52 (28/11/80)	4.40 (1/6/32)

	April 15	April 8	Apr. 1	Year ago (approx
Ind. div. yield %	4.56	4.55	4.47	5.74
Ind. P/E Ratio	10.59	9.46	9.64	7.14
Long Gov. Bond Yield	13.07	12.94	12.46	11.64

N.Y.S.E. ALL COMMON

Apr. 24	Apr. 23	Apr. 22	Apr. 21	1981 High	1981 Low
78.05	77.38	77.41	77.46	79.14 (6/1)	72.45 (28/2)

Rises and Falls	Apr. 24	Apr. 23	Apr. 22
Issues Traded	1,912	1,918	1,913
Rises	950	847	747
Falls	587	689	792
Unchanged	375	382	374
New Highs	146	156	111
New Lows	20	32	37

MONTREAL

	Apr. 24	Apr. 23	Apr. 22	Apr. 21	1981 High	1981 Low
Industrials	392.59	394.21	396.57	394.62	399.55 (10/4)	366.26 (20/2)
Combined	363.31	369.26	370.22	369.09	373.66 (2/4)	339.54 (20/2)
TORONTO Composite	2352.2	2350.44	2350.40	2351.45	2378.3 (10/4)	2151.4 (20/2)

NEW YORK ACTIVE STOCKS

Friday	Stocks traded	Closing price	Change on day		Stocks traded	Closing price	Change on day
Citicorp	1,684,000	26	+1½	St. Oil Indiana	721,900	59⅝	−⅞
Sears Roebuck	1,199,000	20¾	+⅞	Cities Service	687,700	45¼	+¾
Bank America	1,176,100	26	+¾	IBM	644,200	60⅝	+¾
Norton Simon	953,300	18¾	+1⅛	Colgate	597,700	18¼	+1
Tenneco	805,600	35¾	+¾	ITT	597,400	34⅞	+2

	Apr. 24	Apr. 23	Apr. 22	Apr. 21	1981 High	1981 Low
AUSTRALIA All Ord. (1/1/80)	720.8	724.1	726.0	726.2	737.5 (6/4)	641.1 (17/2)
Metal & Minrls. (1/1/80)	623.2	626.6	630.2	629.8	735.2 (7/1)	554.9 (3/6)
AUSTRIA Credit Aktien (2/1/62)	61.71	61.75	61.76	63.65	66.43 (5/1)	61.64 (9/4)
BELGIUM Belgian SE (31/12/63)	80.55	80.62	80.47	81.26	88.16 (17/2)	80.47 (22/4)
DENMARK Copenhagen SE (1/1/73)	107.80	107.64	107.86	108.16	109.25 (3/4)	95.68 (2/1)
FRANCE CAC General (29/12/81)	111.7	111.2	111.1	108.2	112.6 (17/3)	103.1 (29/1)
Ind Tendance (31/12/80)	106.2	104.8	104.1	101.5	106.8 (15/3)	95.4 (27/1)
GERMANY FAZ-Aktien (31/12/58)	234.8	234.26	233.02	232.45	234.8 (24/4)	215.88 (9/2)
Commerzbank(Dec.1953)	725.6	723.4	719.0	717.6	725.6 (24/4)	666.4 (18/2)
HOLLAND ANP-CBS General (1970)	92.4	91.4	90.8	91.0	92.4 (24/4)	85.7 (2/1)
ANP-CBS Indust. (1970)	72.0	71.1	70.2	69.9	72.0 (24/4)	62.8 (2/1)
HONG KONG Hang Seng Bank (31/7/64)	1428.31	1374.86	1344.94	1352.54	1650.82 (4/2)	1295.44 (11/3)
ITALY Banca Comm. Ital (1972)	269.22	265.45	262.55	253.21	269.2 (24/4)	175.36 (6/1)
JAPAN Dow Average (16/5/49)	7534.41	7523.72	7583.22	7497.36	7636.96 (13/4)	6956.52 (13/3)
Tokyo New SE (4/1/68)	551.91	551.81	553.76	546.70	558.75 (22/4)	495.78 (5/1)
NORWAY Oslo SE (1/1/72)	122.73	121.01	120.22	115.88	124.16 (3/3)	116.22 (13/2)
SINGAPORE Straits Times (1966)	857.91	853.69	850.71	850.56	857.9 (24/4)	869.52 (2/1)
SOUTH AFRICA Gold (1958)	654.3	667.9	667.0	647.0	797.6 (7/1)	561.3 (3/5)
Industrial (1958)	640.3	630.9	625.8	623.2	630.9 (25/4)	537.2 (3/2
SPAIN Madrid SE (30/12/80)	114.58	113.90	115.60	113.40	114.36 (24/4)	100.46 (2/1)
SWEDEN Jacobson & P. (1/1/58)	489.78	490.15	489.80	489.73	495.81 (25/3)	404.17 (20/1)
SWITZERLAND Swiss BankCpn. (31/12/58)	298.8	288.4	288.2	299.5	304.2 (2/4)	267.0 (13/2)
WORLD Capital Intl. (1/1/70)	—	159.7	159.2	158.4	162.8 (8/1)	148.8 (17/2)

Base values of all indices are 100 except Australia All Ordinary and Metals—500; NYSE All Common—50; Standard and Poors—10; and Toronto—1,000: the last named based on 1975. † Excluding bonds. ‡ 400 industrials. § 400 industrials plus 40 Utilities. 40 Financials and 20 Transports. (c) Closed.

NOTES:—Prices on this page are as quoted on the individual exchanges and are last traded prices. § Dealings suspended. xd Ex dividend. xc Ex scrip issue. xr Ex rights. xa Ex all.

U.S. economy conference

A CONFERENCE on American Foreign Trade and Investment is being organised by the Financial Times in New York on June 15 and 16 to explain U.S. economic strategy under the Reagan Administration.

Organisation is in association with the Economic Policy Council of the United Nations Association of the U.S., the U.S. Council of the International Chamber of Commerce, and World Business Weekly, the U.S. publication affiliated with the FT.

Details and enrolment forms are available from: Financial Times Conference Organisation, Minster House, Arthur Street, London EC4R 9AX. Telephone: 01-621 1355; telex 27347 FT CONF G.

This advertisement has been placed for the purpose of providing information with regard to Liberty Life Association of Africa Limited and its Subsidiaries and not for the purpose of inducing any person to enter into any agreement for or with a view to acquiring or disposing of any shares in Liberty Life Association of Africa Limited. It does not constitute an offer of, or an invitation to subscribe for or otherwise to acquire, any securities in Liberty Life Association of Africa Limited.
In accordance with the requirements of The Council of The Stock Exchange, cards containing substantially the same information as that set out in this advertisement have been circulated through the Extel Statistical Services in connection with an application to the Council of The Stock Exchange for a Listing of the whole of the Ordinary and Convertible Redeemable Preference Share Capital of Liberty Life Association of Africa Limited.
The Directors of Liberty Life Association of Africa Limited have taken all reasonable care to ensure that the facts stated herein are true and accurate in all material respects and that there are no other material facts, the omission of which would make misleading any statement herein whether of fact or of opinion. All the Directors accept responsibility accordingly.

Liberty Life Association of Africa Limited is incorporated in the Republic of South Africa and does not operate in the United Kingdom nor does it have any association with any life insurer operating in the United Kingdom under a similar name.

Liberty Life Association of Africa Limited

(Incorporated in the Republic of South Africa)

Introduction of shares to The Stock Exchange, London

Arranged by: S. G. Warburg & Co. Ltd. and Standard Chartered Merchant Bank Limited
Brokers for the Introduction: Laing & Cruickshank

Directors

Donald Gordon (South African),
53 Fourth Road, Hyde Park, Sandton, Transvaal, South Africa.
(Chairman)

Ernest Frank Bigland,
Lucas Green Manor, Lucas Green Road, West End, Woking, Surrey, England.
(Deputy Chairman)
(Deputy Chairman—Guardian Royal Exchange Assurance Limited)

Alex Marais Conradie (South African),
1 Kernick Avenue, Melrose North, Johannesburg, Transvaal, South Africa.
(Chairman—Mining Industry Pension Fund)

Henri Paul de Villiers (South African),
3 Somerville Avenue, Melrose Estate, Johannesburg, Transvaal, South Africa.
(Group Managing Director—Standard Bank Investment Corporation Limited)

Peter Robin Dugdale,
Trentham House, Emsworth, Hampshire, England.
(Managing Director—Guardian Royal Exchange Assurance Limited)

Ewart Peter Greenfield,
75 Eastwood Road, Leigh-on-Sea, Essex, England.
(Director, General Manager and Chief Actuary—Guardian Royal Exchange Assurance Limited)

Stephen Handler (South African),
18 Chaucer Avenue, Senderwood, Bedfordview, Transvaal, South Africa.
(General Manager (Technical)—Liberty Life Association of Africa Limited)

Johannes Lodewicus Stefanus Hefer (South African),
49 Central Road, Linden Extension, Randburg, Transvaal, South Africa.

Monty Isidore Hilkowitz (South African),
118 Billern Road, Morningside, Sandton, Transvaal, South Africa.
(Chief General Manager—Liberty Life Association of Africa Limited)

Ian Graham MacPherson (South African),
Jangrafio, Galway Place, Sandhurst, Sandton, Transvaal, South Africa.

Michael Rapp (South African),
19 Laura Lane, Melrose, Johannesburg, Transvaal, South Africa.
(Executive Director and Managing Director of Rapp & Maister Real Estate Company (Proprietary) Limited)

George Hayton Watson (South African),
29 Homestead Avenue, Bryanston, Sandton, Transvaal, South Africa.
(Former Managing Director of Guardian Assurance Company South Africa Limited)

Mark Winterton,
5 Beaufort Road, Bryanston, Sandton, Transvaal, South Africa.
(General Manager (Administration)—Liberty Life Association of Africa Limited)

Alternate Directors

Michael James Spencer Newman,
118 Eccleston Crescent, Bryanston, Sandton, Transvaal, South Africa.
Alternate to Ernest Frank Bigland.
(Managing Director—Guardian National Insurance Company Limited)

James Dennis Brennan,
Orchard House, Gaston Lane, East Bergholt, Colchester, Essex, England.
Alternate to Ewart Peter Greenfield.
(General Manager—Guardian Royal Exchange Assurance Limited)

Share capital

Number of shares		R (000)	£ (000)
33,500,000	Authorised	33,500	18,820
14,000,000	Ordinary shares of R1 each	14,000	7,865
19,500,000	Convertible redeemable cumulative preference shares of R1 each	19,500	10,955
17,214,506	Issued	17,215	9,671
10,915,147	Ordinary shares of R1 each	10,915	6,132
5,207,844	7% redeemable cumulative preference shares (ex conversion) of R1 each	5,208	2,926
464,607	Fixed rate convertible redeemable cumulative preference shares of R1 each—Series A (issued and redeemable at R20 per share) yielding 7½% per annum on the issue price	465	261
626,908	Variable rate convertible redeemable cumulative preference shares of R1 each—Series B (issued and redeemable at R20 per share) currently yielding 7¼% per annum on the issue price	627	352

Share premium and reserves at 31st December, 1980

	R (000)	£ (000)
Share premium and capital redemption reserve	56,978	32,010
Share premium attributable to ordinary shareholders	31,031	17,433
Capital redemption reserve	5,208	2,926
Share premium attributable to convertible redeemable cumulative preference shareholders	20,739	11,651
Non-distributable reserves	37,532	21,085
Distributable reserves	19,401	10,900
Interests of shareholders of Liberty Life Association of Africa Limited	131,126	73,666
Interests of minority shareholders in Subsidiaries	70,037	39,347
Total capital and reserves employed	201,163	113,013

Life fund at 31st December, 1980

	R (000)	£ (000)
Actuarial liabilities under unmatured policies	935,283	525,440
Investment surpluses, development and other reserves	140,583	78,979
Total life fund	1,075,866	604,419
Total capital and reserves and life fund	1,277,029	717,432

Abridged indebtedness

At the close of business on 31st March, 1981 Liberty Life Association of Africa Limited had no borrowings, although it had an outstanding guarantee of R49,150,000 (£27,612,000) in respect of the indebtedness of a Subsidiary. Its Subsidiaries had outstanding at that date debentures, mortgages and bank loans amounting in aggregate to R74,589,000 (£41,904,000) of which R1,065,000 (£598,000) is repayable prior to 31st March, 1982.

Introduction arranged by

S. G. Warburg & Co. Ltd., 30 Gresham Street, London EC2P 2EB.
Standard Chartered Merchant Bank Limited, 33/36 Gracechurch Street, London EC3V 0AX.

Bankers in South Africa

Barclays National Bank Limited, National Bank Building, 84 Market Street, Johannesburg, 2001.
Nedbank Limited, Nedbank Central, 81 Main Street, Johannesburg, 2001.
The Standard Bank of South Africa Limited, Standard Bank Centre, 78 Fox Street, Johannesburg, 2001.

Brokers for the Introduction in the United Kingdom

Laing & Cruickshank, The Stock Exchange, London EC2N 1HA.

Brokers in South Africa

Davis, Borkum, Hare & Co. Inc., 3rd Floor, The Johannesburg Stock Exchange, Diagonal Street, Johannesburg, 2001.
(Member of The Johannesburg Stock Exchange)

Max Pollak & Freemantle, (Incorporating Morris Lipschitz & Co., Allen Hesselberger & Co., and L. Bowman & Michel), 2nd Floor, The Johannesburg Stock Exchange, Diagonal Street, Johannesburg, 2001.
(Members of The Johannesburg Stock Exchange)

Legal advisers in England

Linklaters & Paines, Barrington House, 59/67 Gresham Street, London EC2V 7JA.

in South Africa

Edward Nathan & Friedland Inc., 23rd Floor, Sanlamsentrum, 206 Jeppe Street, Johannesburg, 2001.

Auditors of Liberty Life and Reporting Accountants

Kessel Feinstein, 11th Floor, Penmor Tower, 1 Rissik Street, Johannesburg, 2001.
(Chartered Accountants (S.A.))

Secretary and Registered Head Office of Liberty Life in South Africa

Joel Mark Cane, C.A. (S.A.), 21st Floor, Guardian Liberty Centre, 39 Wolmarans Street, Braamfontein, Johannesburg, 2001.

Transfer Secretaries in the United Kingdom

Charter Consolidated Limited, PO Box 102, Charter House, Park Street, Ashford, Kent TN24 8EQ.

Registrars in South Africa

AFC Security Registrars Limited, Ground Floor, Unicorn House, 70 Marshall Street, Johannesburg, 2001.

Liberty Life

Introduction

Liberty Life is the third largest life assurance office and the largest proprietary insurance company operating in the Republic.

The Company introduced and over the past two decades has marketed successfully a wide range of life assurance contracts, particularly in the field of equity and property-linked life assurance business. Liberty Life is represented in all the major centres of the Republic. Its head office in Johannesburg and most of its major branch operations are located in premises owned by the Group.

Since its inception, Liberty Life has sought to provide a specialised life assurance service for people in the middle and upper income bracket and particularly for members of the professions and for others in the business community. Liberty Life offers to this more sophisticated sector of the South African insurance market a broad selection of linked insurance, retirement and group pension policies, the benefits of which are specifically related to the performance of the Company's designated Fixed Interest, Equity and Property Portfolios. In addition, Liberty Life offers orthodox policies comprising participating whole life and term assurances, mortgage protection insurance policies, as well as temporary and permanent disability protection schemes.

In view of the sector of the insurance market in which business is principally written by Liberty Life, low mortality and expense ratios have been experienced and a minimal lapse ratio has been achieved. The low management expense ratio of Liberty Life, which compares favourably with other leading South African life offices and which is low by world standards, has been a major factor in the Company's ability to be competitive in terms of premium rates and benefits to its policyholders.

Liberty Life's international interests consist principally of holdings of approximately 19 per cent. of Sun Life Assurance Society Limited of the United Kingdom and 25 per cent. of Montreal Life Insurance Company of Canada.

Financial information

At 31st December, 1980, Liberty Life had total assets of R1,387,009,000 (£779,219,000), with shareholders' funds of R131,126,000 (£73,666,000).

The Liberty Life Group owns one of the largest commercial property portfolios in the Republic, independently valued at 31st December, 1980 by Richard Ellis Dunlop Heywood (Property Valuers) at approximately R360,000,000 (£202,000,000). The Liberty Life Group has a diversified portfolio of equities and mutual fund units which had a market value at 31st December, 1980 of R405,945,000 (£228,059,000). Certain of these equities are held through Liberty Life's ownership of approximately 66 per cent. of the issued share capital of Fugit, the largest South African investment trust which is listed on both The Johannesburg Stock Exchange and The Stock Exchange, London. In addition, at 31st December, 1980 Liberty Life held South African Government, public utility and municipal stocks reflected in its financial statements at R332,403,000 (£186,743,000).

For the year ended 31st December, 1980, Liberty Life's net premium income and annuity considerations amounted to R212,860,000 (£119,584,000), compared with R147,788,000 (£83,027,000) for the year ended 31st December, 1979. Net income from investments for the year ended 31st December, 1980 amounted to R83,453,000 (£46,884,000) compared with R61,387,000 (£34,487,000) for the year ended 31st December, 1979.

The net taxed surplus attributable to the ordinary shareholders of Liberty Life, after providing for profits attributable to minority shareholders in Subsidiaries and for preference shareholders' dividends, amounted to R18,019,000 (£10,123,000) in respect of the year ended 31st December, 1980 compared with R14,588,000 (£8,196,000) for 1979. The net taxed surplus per ordinary share increased by 23.6 per cent. from 133.6 cents (75.1p) per ordinary share in 1979 to 165.1 cents (92.8p) per ordinary share in 1980. The dividends payable per ordinary share amounted to 120 cents (67.4p) for 1980 compared with 100 cents (56.2p) for 1979, representing a 20 per cent. increase. During the ten years ended 31st December, 1980, Liberty Life's earnings and dividends per ordinary share increased at an annual compound rate of 19 per cent. and 21 per cent. respectively.

Liberty Holdings

Liberty Holdings (known as Guardian Assurance Holdings (South Africa) Limited prior to 3rd October, 1978) is the holding company of Liberty Life, owning approximately 81 per cent. of its issued ordinary share capital and 56 per cent. of its convertible redeemable cumulative preference share capital. Liberty Life is the major operating company within the Liberty Holdings Group. Liberty Holdings is engaged in construction, development and management of property (Rapp & Maister), acts as an issuing house and provides investment advisory and management services (Glicor) and undertakes unit trust management (Guardbank Management). Most of these activities are directly related to the operations of Liberty Life. Liberty Holdings has an 18.25 per cent. interest in Guardian National, one of the largest fire, accident, general and marine insurance companies operating in the Republic, which is listed on The Johannesburg Stock Exchange and in which GRE has a 51 per cent. interest.

Liblife Controlling Corporation is the ultimate holding company of Liberty Life and is the holding company of Liberty Holdings, owning approximately 52 per cent. of its issued ordinary share capital. The ordinary share capital of Liblife Controlling Corporation is owned indirectly as to 38.75 per cent. and 21.28 per cent. respectively by the family interests of Mr. D. Gordon (Executive Chairman of Liberty Holdings and Liberty Life) and Mr. M. Rapp (Managing Director of Rapp & Maister and an Executive Director of Liberty Holdings and Liberty Life), as to 25 per cent. by Standard Bank Investment Corporation Limited and as to the balance indirectly by other Directors and Senior Executives of the Liberty Holdings Group.

History and business

Development

Liberty Life was registered as a public company under The South African Companies Act on 10th September, 1957, with the principal objective of carrying on life assurance business and commenced operations on 1st October, 1958.

Following the introduction of enabling legislation in 1961, Liberty Life was one of the first South African life assurers to develop and market retirement annuity policies for self-employed persons in the Republic, a product which contributed significantly to the development of the Company's new business. In June 1962, Liberty Life's issued ordinary share capital, then consisting of 100,000 ordinary shares of R2 each, was listed on The Johannesburg Stock Exchange. At the end of 1962 Liberty Life's total assets exceeded R1,000,000 and a dividend was declared for the first time. In March 1964, 76 per cent. of the issued share capital of Liberty Life was acquired by Guardian Assurance Company Limited, of London, which in 1968 merged with Royal Exchange Assurance to form GRE.

In 1965, together with two other South African financial institutions, Liberty Life launched South Africa's first unit trust. Later in 1965, Liberty Life offered for the first time in South Africa life assurance policies linked to equities through a unit trust. In March 1966, Liberty Life extended this linkage concept to the funding of retirement annuity policies for self-employed persons.

In 1967 Liberty Life introduced the principle of Variable Investment Participation (VIP) which established a direct link between policyholders' benefits and the investment performance of Liberty Life itself. Under the VIP principle, shareholders' funds are invested together with policyholders' investments in the VIP Fixed Interest, Equity or Property Portfolios which effectively enables policyholders to participate in partnership with the Company. This partnership principle has become the cornerstone of Liberty Life's marketing philosophy since that date and has proved particularly successful, as evidenced by the strong demand for the VIP linked insurance contract.

In 1968 Liberty Holdings, then known as Guardian Assurance Holdings (South Africa) Limited, which was formed as the holding company of the South African insurance interests of GRE, acquired the controlling interest in Liberty Life held by GRE and the entire shareholding of Guardian South Africa and its shares were listed on The Johannesburg Stock Exchange in December 1968.

In 1972 Liberty Life acquired the South African life assurance operations of the Manufacturers Life Insurance Company of Toronto, Canada ("Manufacturers Life") in exchange for an issue of 1,267,000 ordinary shares of the Company. This acquisition increased Liberty Life's asset base, then in excess of R100,000,000 and also its penetration of the South African life assurance market. Up to 1972, Liberty Life's products had been marketed predominantly through insurance brokers and the acquisition made available to Liberty Life the career agency force of Manufacturers Life. This career agency force has been the foundation of the Company's agency division, which today is a major factor in its marketing strategy. With effect from 1st January, 1974, Liberty Life acquired the South African life assurance operations of Sun Life Assurance Company of Canada ("Sun Life of Canada") in exchange for an issue of 8,730,954 7 per cent. convertible redeemable cumulative preference shares of R1 each. This acquisition further enhanced Liberty Life's position in the South African life assurance market and augmented its career agency force.

During the early 1970s Liberty Life made significant investments in South African real estate. In 1971 Liberty Life introduced the Liberty Property Bond Series of policies which enabled policyholders to hedge against inflation by linking their benefits to property investments and for the first time made available effective participation in large scale commercial property investments through the Liberty Property Portfolio. In 1973 Liberty Life merged its property interests with Real Estate Corporation—a property-owning company which was listed on The Johannesburg and London Stock Exchanges. As a result of this merger, Liberty Life acquired effective control of Real Estate Corporation and in 1975, acquired the balance of the shares not already owned by it. Thereafter Real Estate Corporation was reconstituted as the major property vehicle for Liberty Life's property interests.

In 1976 Liberty Life, through its wholly-owned Subsidiary Real Estate Corporation, acquired the entire issued share capital of Rapp & Maister Holdings Limited, one of South Africa's leading property-owning and development companies (which was also listed on The Johannesburg and London Stock Exchanges), and which had been closely associated in property development with Liberty Life. As a result Liberty Life acquired a large portfolio of retail and central city office developments. In addition, specialised property investment, development and construction expertise became available to the Liberty Life Group through Rapp & Maister Real Estate Company (Proprietary) Limited and Rapp & Maister Construction (Proprietary) Limited (formerly wholly-owned Subsidiaries of Rapp & Maister Holdings Limited) which were reconstituted as wholly-owned Subsidiaries of Liberty Holdings.

Liberty Life now owns, through various Subsidiaries, a large portfolio of prime retail and office developments all of which are freehold, located on strategic sites in most of the major centres of the Republic. At 31st December, 1980, the Liberty Life Group's property interests were independently valued on an "open market value basis" at approximately R360,000,000 (£202,000,000) by Richard Ellis Dunlop Heywood (Property Valuers). Further details of certain major properties owned by the Liberty Life Group appear below.

In 1977 Liberty Life acquired control of Fugit, the largest listed investment trust in South Africa. At 31st December, 1980, Liberty Life and other members of the Liberty Holdings Group owned in aggregate approximately 70 per cent. of Fugit's issued share capital. In addition, Guardian South Africa and Guardian Bankers Growth Fund (a unit trust managed by Guardbank Management) own 2.4 per cent. and 1.8 per cent. respectively of Fugit's issued share capital. At 31st December, 1980, the market value of Fugit's portfolio amounted to over R210,000,000 (£118,000,000) being mainly investments in prime South African gold, mining, financial and industrial shares.

During 1978 Liberty Life introduced the Liberty Managed Portfolio, which combines the benefits of the Property, Equity and Fixed Interest Portfolios of Liberty Life so as to secure optimum overall investment advantages to policyholders. The composition of the Managed Portfolio is determined periodically by Liberty Life to ensure that emphasis is placed on the most appropriate investments depending upon economic and financial considerations prevailing at the time.

In 1978 the Board of Directors of GRE considered it important for GRE to have flexibility to align its United Kingdom policyholders' liabilities in currency matched assets. One of the largest single investments of GRE's life fund, which represented assets held in respect of its liabilities to its United Kingdom policyholders, was its controlling interest in Guardian Assurance Holdings (South Africa) Limited. The magnitude of this investment had created an element of imbalance in the overall structure of GRE's world-wide life assurance portfolio. Arrangements were concluded in July 1978 for Liblife Controlling Corporation to acquire approximately 51 per cent. of the issued ordinary share capital of Guardian Assurance Holdings (South Africa) Limited, which on 3rd October, 1978 changed its name to Liberty Holdings Limited.

GRE retained and presently holds a 10.6 per cent. interest in Liberty Holdings, continues to be represented on the Boards of both Liberty Holdings and Liberty Life and maintains a close relationship with the Liberty Holdings Group. As part of the arrangements with GRE, the shareholding in Guardian South Africa held by Liberty Holdings was reacquired by GRE and on 1st January, 1979 Liberty Holdings acquired a 25 per cent. stake in Guardian South Africa. This holding was exchanged for an interest in Guardian National, the company formed as a result of the merger between Guardian South Africa and Union National South British Insurance Company Limited in October 1980, and at 31st December, 1980, Liberty Holdings owned an 18.25 per cent. interest in Guardian National, with GRE retaining a controlling 51 per cent. interest.

Other investments

Early in 1980, to further its objective of securing a greater involvement in the international life assurance market, Liberty Life acquired a 25 per cent. interest in Montreal Life Insurance Company ("Montreal Life"), a Canadian life assurer within the Guardian Royal Exchange Assurance Group, having total assets of approximately Can. $180,000,000.

During the latter part of 1980, pursuant to this policy, Garsan, a wholly-owned United Kingdom subsidiary of Liberty Life, acquired a 10.2 per cent. interest in the issued share capital of Sun Life Assurance Society Limited ("Sun Life Assurance"), one of the largest life assurers operating in the United Kingdom and listed on The Stock Exchange, London. Since then Garsan has acquired further shares in Sun Life Assurance and at 31st March, 1981 approximately 19 per cent. of the latter company's issued share capital had been purchased at a total cost of approximately £27,500,000. This interest constitutes Liberty Life as the largest single shareholder in Sun Life Assurance.

Over the past decade and in accordance with a policy of investing in natural resources, Liberty Life made significant investments in energy related enterprises principally through its 35 per cent. interest, held directly and indirectly, in The Clydesdale (Transvaal) Collieries Limited ("Clydesdale"), a large coal mining group which is listed on The Johannesburg and London Stock Exchanges. Further interests of approximately 15 per cent. are held in Clydesdale by other members of the Liberty Holdings Group, which since February 1981 has controlled Clydesdale. This mining group owns the extensive Coalbrook Colliery in Sasolburg and the New Clydesdale Colliery in Witbank, as well as a 50 per cent. interest in Matla Coal Mine which commenced production in May 1978. Matla will, in due course, become one of the world's largest underground coal mining operations scheduled to produce 10 million tons of coal per annum mainly to supply the requirements of the 3,600 megawatt Matla Power Station.

Liberty Life and the Liberty Holdings Group

Liberty Life is the major operating company within the Liberty Holdings Group. Certain other companies within the Liberty Holdings Group provide services to Liberty Life, the most important of which are set out below.

Glicor and Rapp & Maister Real Estate Company (Proprietary) Limited respectively provide investment management and property administration services. Glicor provides investment management services to Fugit in consideration for which Glicor receives an annual fee of 2½ per cent. of Fugit's investment income pursuant to an agreement which was approved at a general meeting of Fugit during 1978. No fee is payable by Liberty Life to Glicor in respect of investment services provided directly to Liberty Life. However, a proportionate share of Glicor's operating expenses is recovered from Liberty Life commensurate with the amount of time and work expended by Glicor. In consideration for managing, letting and administering the Liberty Life Group's property interests, Rapp & Maister Real Estate Company (Proprietary) Limited recovers a proportionate share of its operating expenses on the basis of the amount of time and work expended. Rapp & Maister Construction (Proprietary) Limited also undertakes construction work for the Liberty Life Group and is remunerated on the basis of actual building costs incurred plus a fixed supervision charge which in no case exceeds 6.67 per cent. of building costs to cover operating expenses and provide a measure of profit. This charge is significantly less than that charged by Rapp & Maister Construction (Proprietary) Limited to third parties and where building work is undertaken for the Liberty Life Group's own occupation the supervision charge is confined to recovery of a proportionate share of operating expenses.

Liberty Life Association of Africa Limited

The shareholders and policyholders of Liberty Life

A major proportion of Liberty Life's business consists of linked insurance business and various formulae apply for the determination of the policyholders' proportion of investment and technical surpluses achieved in the various Equity, Fixed Interest, Property and Managed Portfolios, the balance being attributable to shareholders. The shareholders' proportion is generally 10 per cent. of the attributable income and technical surplus. The allocation of the underlying investments to specific types of linked policies is made solely for the purpose of determining the quantum of benefits under the insurance policies concerned and the relevant underlying investments at all times remain the unencumbered property of Liberty Life. No holder of or beneficiary under a linked policy has any proprietary or real right in relation to the investments underlying such policy. Insofar as orthodox life business is concerned, generally not less than 90 per cent. of the surplus relating to the relevant with-profit class of business is distributable by way of reversionary bonus or cash dividend to policyholders in the relevant class. Cash dividends are payable only to the holders of South African participating policies originally issued by Manufacturers Life Insurance Company of Canada and Sun Life Assurance Company of Canada.

Summary of financial development

Set out below are tables, based on published audited accounts, indicating the salient features of Liberty Life's development from 1960 until the end of 1980:–

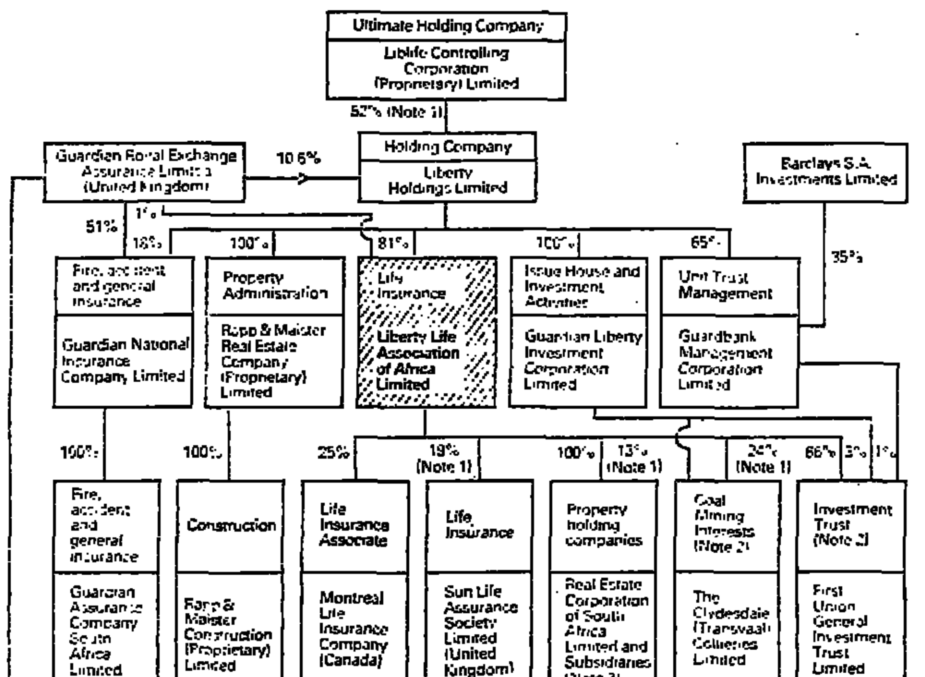
	Net premium income and annuity considerations		Management expenses as percentage of net premium income and annuity considerations	Net income from investments		Investments	
	R (000)	£ (000)	%	R (000)	£ (000)	R (000)	£ (000)
1960	189	106	23.9	10	6	160	90
1965	2,095	1,177	9.0	194	109	3,998	2,246
1970	10,517	5,908	8.7	2,620	1,472	38,450	21,607
1975	63,488	38,476	11.5	28,101	15,787	367,870	206,669
1976	83,612	46,973	11.2	34,646	19,464	453,265	254,643
1977	94,352	53,007	11.2	40,144	22,553	584,510	328,376
1978	113,826	63,947	10.3	48,015	26,975	636,266	235,543
1979	147,783	83,027	8.7	61,387	34,487	940,327	528,274
1980	212,860	119,584	7.4	83,453	46,884	1,304,947	733,116

	Total assets		Life fund		Share capital and reserves	
	R (000)	£ (000)	R (000)	£ (000)	R (000)	£ (000)
1960	272	153	111	62	131	74
1965	4,772	2,681	3,648	2,049	736	413
1970	42,575	23,919	30,560	17,169	9,577	5,380
1975	388,152	218,063	314,108	176,465	53,300	29,944
1976	479,279	269,258	371,179	208,528	67,047	37,667
1977	621,658	349,246	451,583	253,698	68,994	38,761
1978	737,076	414,088	560,845	315,081	68,490	38,478
1979	1,003,498	563,763	769,209	432,140	76,497	42,976
1980	1,387,009	778,219	1,075,866	604,419	131,126	73,666

	New business premium income: Recurring annualised premium income		New business premium income: Single premiums and annuity considerations		Number of ordinary shares in issue at 31st December	Earnings per ordinary share		Dividends per ordinary share	
	R (000)	£ (000)	R (000)	£ (000)	(000)	cents	p	cents	p
1960	133	76	–	–	60*	0.1†	0.1†	–	–
1965	848	476	37	21	520	1.2†	0.7†	0.5†	0.3†
1970	1,865	1,048	1,120	629	5,616	29.2	16.4	18.0**	10.1**
1975	16,013	8,999	6,503	3,653	8,525	73.9	41.5	54.0	30.3
1976	18,347	10,307	9,755	5,480	9,908	85.7	48.1	64.0	36.0
1977	20,010	11,242	9,706	5,453	10,915	99.5	55.9	74.0	41.6
1978	22,263	12,510	14,616	8,212	10,915	115.2	64.7	86.0**	48.3**
1979	32,633	18,335	26,174	14,704	10,915	133.6	75.1	100.0	56.2
1980	48,451	27,242	52,082	29,260	10,915	165.1	92.8	120.0	67.4

*Nominal value R2 per share, sub-divided into shares of a nominal value of R1 per share in 1964.
†Adjusted for capitalisation and rights issues.
**Excludes special dividends:
1970: 4.5 cents (2.5p) per share; 1978: 50.0 cents (28.1p) per share.

The Liberty Life Group of Companies, including important interests and relationships at 31st December, 1980.



Note 1: Holding at 31st March, 1981.
Note 2: Further interests of approximately 2% in each of Clydesdale and Fugit respectively are owned by Guardian Bankers Growth Fund, a unit trust managed by Guardbank Management Corporation Limited.
Note 3: Including Rapp & Maister Holdings Limited.

Subsidiaries

The following are the principal Subsidiaries of Liberty Life:–

Name of Company	Issued share capital	Percentage owned	Principal business
		%	
Real Estate Corporation of South Africa Limited	R869,083	100.0	Property-owning and holding company for various Liberty Life Group property companies.
First Union General Investment Trust Limited	R18,530,000	66.2	Investment Trust.
Garsan Limited	£10,000	100.0	Investment company owning approximately 19 per cent. of Sun Life Assurance Society Limited.

Liberty Life has a further 89 Subsidiary companies, most of which are involved in the Group's property investments.

Management and employees

Management

Under the overall direction of the Group Executive Chairman, Mr. Donald Gordon, the operations of the Company are supervised by the Chief General Manager supported by two General Managers, seven Deputy General Managers and nine Assistant General Managers, each of whom is responsible for a specific area of the Company's operations. Glicor and Rapp & Maister respectively provide investment management, property administration and construction services to the Liberty Life Group. Computer and other group services are provided by Guardian Liberty Services (Proprietary) Limited which is a Subsidiary of Liberty Holdings.

The following table provides details of the general management of the Company, Glicor and Rapp & Maister:–

Liberty Life	Position	Age	Length of service (years)
D. Gordon, C.A. (S.A.)	Executive Chairman	50	23
M.I. Hilkowitz, F.I.A., A.S.A.	Chief General Manager	40	10
S. Handler, B. Com., F.F.A., A.I.A.	General Manager (Technical)	40	14
M. Winterton, F.I.A.	General Manager (Administration)	49	11
H. A. Brews, B.Sc.	Deputy General Manager (Broker Services)	54	18
Y. G. J. Dhalluin, B.A.	Deputy General Manager (Agency)	41	14
R. Goldschmidt	Deputy General Manager (Premium Accounts)	55	10
B. Z. Lipshitz, B.Sc., F.I.A., A.S.A.	Deputy General Manager (Pensions)	41	11
D. S. Nohr, B.Sc., F.I.A.	Deputy General Manager (Actuarial)	36	16
A. Romanis, C.A.	Deputy General Manager (Finance)	41	6
L. A. F. H. van Wouw	Deputy General Manager (Systems and Planning)	47	7
H. H. Biermann	Assistant General Manager (Investment Marketing)	32	4
P. G. Conradie	Assistant General Manager (Servicing)	46	10
R. O. Fowler, B. Com., D.B.A. (London)	Assistant General Manager (Marketing)	56	10
M. L. Garbutt	Assistant General Manager (Broker Services)	35	7
B. S. J. Golding	Assistant General Manager (Selections)	40	10
W. Irwin, A.C.I.S.	Assistant General Manager (Technical Marketing)	49	10
M. J. Jackson, M.A.	Assistant General Manager (Human Resources)	31	6
S. C. Rees	Assistant General Manager (New Business)	38	8
J. W. F. van Nunen, B.Sc., M.B.L.	Assistant General Manager (Data Processing)	42	7
J. M. Cane, C.A. (S.A.)	Group Secretary	35	7
Glicor			
D. Gordon, C.A. (S.A.)	Executive Chairman		
J. R. McAlpine, B.Sc., C.A.	Executive Director and General Manager	40	11
F. B. Sher, B. Com., LL.B.	Executive Director and General Manager	36	15
J. G. Inglis, B.A.	Deputy General Manager	38	6
Rapp & Maister			
D. Gordon, C.A. (S.A.)	Chairman		
M. Rapp, C.A. (S.A.)	Managing Director	45	22
W. E. Cesman, B.Com., C.A. (S.A.)	Executive Director	38	5
G. Main, B.Com., C.A. (S.A.)	Executive Director	39	11
R. MacFarlane, C.A. (S.A.)	Executive Director	57	11
L. J. Neuburger, Pr. (Eng.), B.Sc.	Executive Director	40	11

Employees

At 31st December, 1980 Liberty Life (excluding its career agency force), Glicor and Rapp & Maister, together had approximately 1,200 administrative employees, all of whom were employed in the Republic. The vast majority of the Group's employees (including certain executive Directors) participate in The Liberty Life Staff Share Trust, which was established under The South African Companies Act, to enable employees to participate in the future growth of Liberty Life. The introduction of this Trust has enabled all employees to take an equity investment in the Company of at least R2,000 (£1,124) in the form of 7½ per cent. fixed rate convertible redeemable cumulative preference shares – Series A. (See details of "The Liberty Life Staff Share Trust" under "Statutory and general information" below).

Since 1968 senior employees of the Liberty Life Group have participated in the Liberty Holdings Senior Staff Share Option Scheme under which options have been granted in respect of shares in Liberty Holdings. Participants in this Scheme are given an option to acquire ordinary shares in Liberty Holdings at their middle market price on The Johannesburg Stock Exchange on the day preceding the granting of the option. Options are granted for a period not exceeding seven years and may not normally be implemented prior to the expiration of a five year period. No employee may receive an option to acquire more than 75,000 shares in Liberty Holdings.

Regulation of the life insurance industry in the Republic

Life insurance business conducted in the Republic is regulated by the Insurance Act 1943, as amended ("the Insurance Act"). The Insurance Act, inter alia, lays down the minimum basis for the calculation of liabilities under unmatured policies and prescribes the basis upon which assets held in respect of life insurance business must be valued for statutory purposes. The Insurance Act requires each life insurance company in South Africa to appoint a valuator who must be a duly qualified actuary in order, inter alia, to verify the liabilities under the unmatured policies of such company. The Company's actuarial liabilities under unmatured policies have been computed in accordance with the provisions of the Insurance Act, and the bases upon which the Company's investments have been valued for purposes of the Company's financial statements generally accord with the provisions of the Insurance Act and are set out in Note 1 to the Auditors' Report.

In accordance with the provisions of the Insurance Act, 33 per cent. of a life insurer's net liabilities, including its liabilities under unmatured policies, must be invested in prescribed assets such as Government, public utility, municipal stocks and/or deposits and balances with banks and building societies and such assets must include securities issued by or loans to the Government of the Republic to the extent of 15½ per cent. of such net liabilities. In respect of liabilities attributable to pension and retirement annuity business, the relevant percentages are 53 per cent. and 20½ per cent. respectively. Subject to compliance with these prescribed investment requirements, a South African life insurer may make such investments as are appropriate to its investment policy at the discretion of its Board of Directors.

South African taxation (currently 42 per cent. for companies, including life insurance companies) is computed on the taxable income of a life insurer in terms of Section 28 of the Income Tax Act 1962, as amended, which provides that the taxable income derived from the carrying on of life insurance business is deemed to be an amount equivalent to 30 per cent. of investment income derived from its life insurance business, excluding the investment income derived from pension and retirement annuity business.

The maximum level of remuneration payable to life insurance brokers in South Africa is regulated under the Insurance Act. These regulations have been in force since 1977, but do not apply to full-time career agents other than the obligation imposed on life insurers to maintain in general terms a principle of "equivalence of reward" in the remuneration of insurance brokers and full time career agents.

Auditors' Report

The following is a copy of a Report by the Auditors and Reporting Accountants, Kessel Feinstein, Chartered Accountants (S.A.):–

To the board of directors of Liberty Life Association of Africa Limited.

We have examined the consolidated balance sheets of Liberty Life Association of Africa Limited and its subsidiaries at 31st December, 1975, 1976, 1977, 1978, 1979 and 1980, the consolidated income statements for the five years ended 31st December, 1980 and the notes at 31st December, 1979 and 1980 set out below.

The aforementioned have been prepared in the manner prescribed for insurance companies by the South African Companies Act, 1973, as amended.

In our opinion, based on our examination and the reports of the auditors of certain subsidiaries not audited by us, the consolidated balance sheets fairly present the financial position of the Group at 31st December, 1975, 1976, 1977, 1978, 1979 and 1980 and the consolidated income statements fairly present the results of its operations for the five years ended 31st December, 1980, in the manner required by the South African Companies Act, 1973, as amended.

KESSEL FEINSTEIN
Chartered Accountants (S.A.)
Johannesburg

16th April, 1981.

Consolidated Income Statements – Year Ended 31st December,

	Note	1976 R (000)	1977 R (000)	1978 R (000)	1979 R (000)	1980 R (000)	†1980 £ (000)
Income		118,714	135,543	162,541	210,441	239,308	168,151
Net premium income and annuity considerations		83,612	94,352	113,826	147,788	212,860	119,584
Net income from investments		34,646	40,144	48,015	61,387	83,453	46,884
–Income from investments		34,646	41,119	50,268	64,270	87,401	49,102
–Portion attributable to minority shareholders in subsidiaries		—	975	2,253	2,883	3,948	2,218
Sundry Income		456	1,047	700	1,266	2,995	1,683
Outgoings		53,174	61,763	67,665	76,925	96,952	54,468
Claims and policyholders' benefits		27,869	35,039	37,617	39,871	47,289	26,567
Commissions		12,643	12,545	14,569	20,311	28,899	16,235
Management expenses		9,390	10,548	11,669	12,787	15,753	8,850
Taxation	10	3,272	3,631	3,810	3,956	5,011	2,815
Excess of Income over Outgoings		65,540	73,780	94,876	133,516	202,356	113,683
Transfer to Life Fund		55,995	62,706	81,940	118,564	183,380	103,022
Increase in actuarial liability, provisions for policyholders' bonuses, other amounts attributable to policyholders and net adjustments to life fund reserves							
Net Taxed Surplus from Life Insurance Operations		9,545	11,074	12,936	14,952	18,976	10,661
Preference dividends	11	1,151	717	364	364	957	538
Net Taxed Surplus attributable to Ordinary Shareholders		8,394	10,357	12,572	14,588	18,019	10,123
Appropriations		7,341	9,077	14,845	12,635	13,098	7,358
Transfer to general reserve		1,000	1,000	—	1,719	—	—
Ordinary dividends – normal	11	6,341	8,077	9,388	10,916	13,098	7,358
– special		—	—	5,457	—	—	—
		1,053	1,280	(2,273)	1,953	4,921	2,765
Unallocated Surplus at beginning of year		2,467	3,520	4,800	2,527	4,480	2,517
Unallocated Surplus at end of year		3,520	4,800	2,527	4,480	9,401	5,282
Net Taxed Surplus per Ordinary Share	1(c)	85.7 cents	99.5 cents	115.2 cents	133.6 cents	165.1 cents	92.8p
Dividends per Ordinary Share		64.0 cents	74.0 cents	*86.0 cents	100.0 cents	120.0 cents	67.4p

*Excludes special dividend of 50.0 cents per share.
†Sterling translations have been made on the basis of R1.78 to £1 and are not part of the audited Financial Statements.

Consolidated Balance Sheets – 31st December,

	Note	1975 R (000)	1976 R (000)	1977 R (000)	1978 R (000)	1979 R (000)	1980 R (000)	†1980 £ (000)
Capital and Reserves								
Share capital, share premium and capital redemption reserve	2	42,503	52,560	52,535	52,535	52,535	74,193	41,681
Non-distributable reserves	3	2,049	3,686	3,378	5,147	9,482	37,532	21,085
Distributable reserves	4	8,748	10,801	13,081	10,808	14,480	19,401	10,900
Interests of Shareholders of Liberty Life Association of Africa Limited		53,300	67,047	68,994	68,490	76,497	131,126	73,666
Interests of Minority Shareholders in Subsidiaries	1(b)(vi)	—	—	27,932	35,194	63,768	70,037	39,347
Total Capital and Reserves Employed		53,300	67,047	96,926	103,684	140,265	201,163	113,013
Long Term Liabilities	5	4,794	21,141	22,233	21,695	29,692	57,693	32,412
Life Fund	1(f)	314,108	371,179	451,583	560,845	769,209	1,075,866	604,419
Actuarial liabilities under unmatured policies		296,341	349,881	421,159	517,166	684,021	935,283	525,440
Investment surpluses, development and other reserves		17,767	21,298	30,424	43,679	85,188	140,583	78,979
		372,202	459,367	570,742	686,224	939,166	1,334,722	749,844
Represented by:								
Investments		367,870	453,265	584,510	686,266	940,327	1,304,947	733,116
Government, public utility and municipal stocks	6(a)	112,164	137,057	186,774	226,472	288,022	332,403	186,743
Debentures, mortgages and loans	6(a)	127,630	126,786	134,382	141,131	148,295	160,872	90,377
Freehold property, leasebacks and other property interests	6(b)	73,712	145,690	164,257	188,354	227,560	359,827	202,150
Shares and mutual fund units	6(c)	42,422	39,172	96,087	128,339	250,470	405,945	228,059
Fixed deposits with banks and building societies		11,942	4,560	3,010	1,970	25,980	45,900	25,787
Fixed Assets	7	826	988	1,233	1,304	1,503	1,968	1,106
Current Assets		19,456	25,026	35,915	49,506	61,668	80,094	44,997
Net outstanding premiums, accrued investment income and other debtors		17,540	23,330	32,496	38,225	48,550	60,672	34,086
Amounts due by fellow subsidiaries		397	664	1,773	5,348	5,307	3,404	1,912
Balances with financial institutions and cash resources		1,519	1,032	1,646	5,933	7,811	16,018	8,999
Total Assets		388,152	479,279	621,658	737,076	1,003,498	1,387,009	779,219
Current Liabilities		15,950	19,912	50,916	50,852	64,332	52,287	29,375
Outstanding claims and policyholders' benefits, amounts owing on investments acquired and other creditors		7,201	9,424	34,731	34,912	50,366	41,762	23,462
Amounts due to holding company and fellow subsidiaries		90	3,135	6,463	7,344	6,172	380	214
Taxation		3,439	2,855	4,410	2,301	1,281	1,729	971
Shareholders for dividends		5,220	4,498	5,312	6,295	6,513	8,416	4,728
		372,202	459,367	570,742	686,224	939,166	1,334,722	749,844

†Sterling translations have been made on the basis of R1.78 to £1 and are not part of the audited Financial Statements.

Notes

1. Accounting Policies

The more important accounting policies adopted by the Group, which are consistent with those of the previous years, are as follows:–

(a) Consolidation policy and accounting presentation
The consolidated income statements, consolidated balance sheets and notes include the results and financial position of the holding company and its subsidiaries. The aforementioned are prepared on a basis consistent with that adopted in the Company's financial statements which are not required to disclose certain information in terms of the Companies Act, 1973, as amended. The results of subsidiaries are included from the effective dates of acquisition and to the effective dates of disposal.

(b) Valuation and treatment of investments

(i) Government, public utility and municipal stocks are reflected at cost together with an annual adjustment which proportionately adjusts them to redemption value over the outstanding term to maturity.

(ii) Debentures, mortgages and loans are reflected at cost less provisions for diminution in value together with an annual adjustment, where applicable, which proportionately adjusts them to redemption value over the outstanding term to maturity.

(iii) Freehold property, leasebacks and other property interests are reflected at a valuation based on 'open market value' which has been determined by an independent firm of property valuers, Richard Ellis Dunlop Heywood.

(iv) Listed shares, mutual fund units and unlisted shares are reflected at market value, repurchase price and Directors' valuation respectively.

(v) Unrealised surpluses or deficits arising on the valuation of investments in terms of (iii) and (iv) above are transferred directly to the life fund to provide for the benefits attributable to linked policyholders or are credited or charged to the appropriate investment surpluses within the life fund. To the extent that surpluses or deficits are not attributable to policyholders' interests, and after deducting the interests of minority shareholders in subsidiary companies, they are reflected in non-distributable reserves or carried forward in investment surpluses within the life fund.

(vi) The portion of the revaluation surpluses or deficits referred to in (v) above attributable to minority shareholders is included in 'Interests of minority shareholders in subsidiaries' in the consolidated balance sheet.

(vii) Realised surpluses on disposal of investments are brought to account in the year in which they arise and to the extent that they are not transferred directly to the life fund to provide for the benefits applicable to linked policyholders they are included under 'Income from Investments'. Realised surpluses attributable to certain linked policyholder liabilities arising from the disposal of government, public utility and municipal stocks where such disposals amount to an exchange of one security for another of a different term in circumstances where such surplus amounts to an adjustment of future income yield are transferred directly to the life fund. These amounts are released as income on an equitable basis over an appropriate period of years.

(c) Depreciation
Depreciation is not provided in respect of land and buildings. Building appurtenances and other fixed assets are depreciated on straight line or reducing balance bases over their expected useful lives.

(d) Conversion of foreign currencies
Assets, liabilities and results of foreign subsidiaries and other assets and liabilities in foreign currencies are translated into South African currency at the rates ruling at the balance sheet date. Realised and unrealised surpluses and deficits on exchange relating to investments are reflected in investment surpluses within the life fund. Other surpluses and deficits are dealt with in the income statement.

(e) Calculation of net taxed surplus per ordinary share
The calculation of net taxed surplus per ordinary share is based on the number of ordinary shares in issue during the year computed on a proportionate basis from the effective dates on which shares are issued.

(f) Calculation of actuarial liabilities under unmatured policies
The Company's liabilities under unmatured policies are computed annually at the balance sheet date by the Company's valuator in accordance with the provisions of The Insurance Act, 1943, as amended.

2. Share Capital, Share Premium and Capital Redemption Reserve

	1979 Number	1979 R (000)	1980 Number	1980 R (000)
(a) Authorised share capital				
Ordinary shares of R1 each	14,000,000	14,000	14,000,000	14,000
Convertible redeemable cumulative preference shares of R1 each	19,500,000	19,500	19,500,000	19,500
	33,500,000	33,500	33,500,000	33,500
(b) Issued share capital				
Ordinary shares of R1 each	10,915,147	10,915	10,915,147	10,915
Preference shares of R1 each	5,207,844	5,208	6,299,359	6,300
–7% redeemable cumulative preference shares (ex-conversion)	5,207,844	5,208	5,207,844	5,208
–Fixed rate convertible redeemable cumulative preference shares–Series A (issued and redeemable at R20 per share) yielding 7½% per annum on the issue price.	—	—	464,607	465
–Variable rate convertible redeemable cumulative preference shares – Series B (issued and redeemable at R20 per share) which yielded 6¼% per annum on the issue price during the period ended 31st December, 1980.	—	—	626,908	627
	16,122,991	16,123	17,214,506	17,215
(c) Share premium and capital redemption reserve		36,412		56,978
Share premium attributable to ordinary shareholders:				
Balance at beginning of year		31,204		31,204
Expenses attributable to issue of convertible redeemable cumulative preference shares		—		173
		31,204		31,031
Capital redemption reserve		5,208		5,208
Share premium attributable to convertible redeemable cumulative preference shares		—		20,739
		52,535		74,193

(d) The 5,207,844 7% redeemable cumulative preference shares (ex-conversion) will be redeemed by the Company at par in five equal annual instalments commencing on 1st July, 1981.

(e) The 1,091,515 convertible redeemable cumulative preference shares, Series A and Series B, are convertible, at the option of the holder, into an equivalent number of ordinary shares on 30th September in any of the years 1985, 1986, 1987 and 1988. These preference shares, unless converted into ordinary shares on the aforementioned dates, will be redeemed on 30th September, 1988 at R20 per share, provided however that, upon receipt of not less than 30 days' notice, the date of redemption, at the option of the holder, may be accelerated to 30th September in any of the years 1985, 1986 or 1987.

(f) In terms of a resolution of the Company in general meeting the unissued shares, excluding 1,091,515 ordinary shares over which the Directors were granted specific authority at a general meeting of the Company held on 4th July 1980 to provide for the conversion rights attaching to the convertible redeemable cumulative preference shares, are under the control of the Directors until the next annual general meeting.

	1979 R (000)	1980 R (000)
3. Non-distributable Reserves		
Balance at beginning of year	5,147	9,482
Adjustments arising on revaluation of property interests and unlisted shares	4,335	28,050
	9,482	37,532
4. Distributable Reserves		
General Reserve	10,000	10,000
Unallocated surplus	4,480	9,401
	14,480	19,401
5. Long Term Liabilities		
Debentures secured over certain freehold property	17,937	17,559
Debentures secured by certain listed shares	2,000	2,000
Foreign bank loans secured by certain listed shares	—	31,042
Mortgage bonds secured over certain freehold property	9,118	6,027
Other unsecured loans	637	1,065
	29,692	57,693
6. Investments		
(a) The aggregate redemption values of government, public utility and municipal stocks, debentures, mortgages and loans which are normally held to maturity are in excess of their book values		
(b) Freehold property, leasebacks and other property interests		
Freehold property and leasebacks (including building appurtenances) (certain of which are mortgaged (Note 5))	202,307	361,529
Accumulated depreciation on building appurtenances	2,449	3,158
At valuation	199,858	358,371
Other property interests	27,702	1,456
–Unlisted shares at Directors' valuation	13,024	476
–Debentures and loans	14,678	980
	227,560	359,827
Details of all properties owned by the Group are contained in registers maintained at the registered office of the subsidiaries concerned and are open for inspection by members or their duly authorised representatives.		
(c) Shares and mutual fund units.		
Listed shares at market value (certain of which are pledged (Note 5))	212,066	350,806
Mutual Fund units at repurchase price	36,935	50,280
Unlisted shares at Directors' valuation	1,469	4,859
	250,470	405,945
7. Fixed Assets		
Furniture, equipment and vehicles at cost	2,406	3,079
Accumulated depreciation	903	1,111
	1,503	1,968
8. Payments to Directors		
(a) Emoluments		
For services as Directors		
– from the Company	17	16
– from a subsidiary	2	2
For managerial services	209	242
	228	260
(b) Pension benefit for retired executive Director	84	—
9. Auditors' Remuneration		
Audit fees	82	128

10. Taxation

South African normal tax is computed on taxable income in terms of the Income Tax Act, 1962, as amended, which provides for a special rate of taxation on investment income derived from the carrying on of long-term insurance business.

Taxation is considered a charge against income, not being related to surplus, and is reflected as such in the consolidated income statements.

11. Dividends

	1979 R (000)	1980 R (000)
(a) Preference Shares	364	957
– On 7% redeemable cumulative preference shares (ex-conversion):		
Dividend no. 17 of 3½ cents per share in respect of the period 1st January, 1980 to 30th June, 1980 declared on 12th June, 1980	182	182
Dividend no. 18 of 3½ cents per share in respect of the period 1st July, 1980 to 31st December, 1980 declared on 10th December, 1980	182	182
	364	364
– On fixed rate convertible redeemable cumulative preference shares – Series A: Accrued dividend payable at 7½% per annum for the period 8th August, 1980 to 31st December, 1980	—	279
– On variable rate convertible redeemable cumulative preference shares – Series B: Accrued dividend payable at 6¼% per annum for the period 8th August, 1980 to 31st December, 1980	—	314
(b) Ordinary shares	10,916	13,098
– Interim dividend no. 24 of 50 cents (1979: 42 cents) per share declared on 20th August, 1980	4,585	5,457
– Final dividend no. 25 of 70 cents (1979: 58 cents) per share declared on 4th March, 1981	6,331	7,641
	11,280	14,055

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Liberty Life Association of Africa Limited

Statutory and general information

Liberty Life's capital

Authorised share capital

The authorised share capital of the Company is R33,500,000 divided into 14,000,000 ordinary shares of R1 each and 19,500,000 convertible redeemable cumulative preference shares of R1 each, which may be issued with or without conversion rights and the right to a fixed or variable cumulative preference dividend payable on such terms and conditions and at such rates as are prescribed from time to time in the Company's Articles of Association and by the Board of Directors of the Company.

Issued share capital

Number of shares		Nominal value R (000)
10,915,147	Ordinary shares of R1 each	10,915
5,207,844	7% redeemable cumulative preference shares (ex conversion) of R1 each	5,208
464,607	Fixed rate convertible redeemable cumulative preference shares of R1 each – Series A yielding 7½% per annum on the issue price of R20 per share ("the 7½% fixed rate preference shares – Series A")	465
626,908	Variable rate convertible redeemable cumulative preference shares of R1 each – Series B currently yielding 7¼% per annum on the issue price of R20 per share ("the variable rate preference shares – Series B")	627
17,214,506		17,215

The 5,207,844 7% redeemable cumulative preference shares (ex conversion)

The 5,207,844 7 per cent. redeemable cumulative preference shares (ex conversion) are redeemable at par in five equal annual instalments commencing on 1st July, 1981 and terminating on 1st July, 1985. In view of their scheduled early redemption and as these preference shares are no longer convertible, no listing is being sought for them on The Stock Exchange, London.

Dividends are payable at the rate of 7 per cent. per annum, half-yearly in arrears on 30th June and 31st December. Under the Company's Articles of Association, this dividend is to be paid in priority to the payment of any dividend to the holders of the ordinary shares in the Company, the 7½ per cent. fixed rate preference shares – Series A and the variable rate preference shares – Series B.

The 7½% fixed rate preference shares – Series A, and the variable rate preference shares – Series B

These preference shares were issued for cash with effect from 8th August, 1980 at a price of R20 per share (being a premium of R19 per share). Dividends are payable half-yearly in arrears on 31st March and 30th September.

The dividend payable on the 7½ per cent. fixed rate preference shares – Series A yields 7½ per cent. per annum on the issue price of R20 per share. The dividend payable in respect of the variable rate preference shares – Series B, currently yields 7¼ per cent. per annum on the issue price of R20 per share. The rights attaching to the variable rate preference shares – Series B, provide that should the rate of interest on overdrafts charged by Barclays National Bank Limited and The Standard Bank of South Africa Limited to first-class corporate borrowers exceed 9½ per cent. per annum on the first day of the month during any monthly period in respect of which a dividend is payable, then the yield on the variable rate preference shares – Series B will be increased by 50 per cent. of the amount by which such higher rate exceeds (to the lower full half per cent.) 9½ per cent. per annum in proportion to the number of full months (or part thereof) to which such increase is applicable. Any change of less than a full one-half per cent. will be ignored for this purpose. The maximum yield on the variable rate preference shares – Series B in respect of any month will be ⅞ of one per cent. being equivalent to a yield of 10½ per cent. per annum on the issue price. The above formula applies to any reduction in the said overdraft rates provided that the minimum yield on the variable rate preference shares – Series B will not be less than 6½ per cent. per annum on the issue price. Since their issue the variable rate preference shares – Series B have yielded between 6¼ and 7¼ per cent. per annum on their issue price.

Each of the 7½ per cent. fixed rate preference shares – Series A and the variable rate preference shares – Series B, will, at the option of the holder, be convertible into 1 new fully paid ordinary share in Liberty Life, to be issued at a price of R20 per share with effect from 30th September in any of the years 1985 to 1988 inclusive. In order to exercise any such right of conversion, the holders of the 7½ per cent. fixed rate preference shares – Series A and the variable rate preference shares – Series B must give Liberty Life not less than 30 days' written notice prior to 30th September in any of the aforementioned years. The Company's Articles of Association contain provisions to protect the said conversion rights in the event of a consolidation or subdivision of the ordinary shares and in the event of capitalisation issues and further entitle the holders of the said preference shares to participate in rights issues as if they had exercised their conversion rights.

The dividend payable to the holders of the 7½ per cent. fixed rate preference shares – Series A and the variable rate preference shares – Series B, rank pari passu for payment after the dividends payable to the holders of the 5,207,844 7 per cent. redeemable cumulative preference shares (ex conversion), but prior to the payment of dividends to the ordinary shareholders of Liberty Life.

On a winding-up or other return of capital of Liberty Life, the holders of the 7½ per cent. fixed rate preference shares – Series A and the variable rate preference shares – Series B will rank pari passu for payment after the capital payable to the holders of the 5,207,844 7 per cent. redeemable cumulative preference shares (ex conversion), but prior to the payment of capital to the ordinary shareholders of Liberty Life.

The 7½ per cent. fixed rate preference shares – Series A and the variable rate preference shares – Series B, unless converted into ordinary shares in Liberty Life in accordance with the abovementioned provisions will be redeemed on 30th September, 1988 at R20 per share, provided however that, upon giving to Liberty Life not less than 30 days' written notice, the date of redemption of such preference shares may, at the option of the holder, be accelerated to 30th September, in any of the years 1985, 1986 or 1987.

Unissued share capital

At a general meeting of the Company held in July 1980, the shareholders resolved that of the unissued shares of the Company 1,993,358 ordinary shares of R1 each and 13,200,641 convertible redeemable cumulative preference shares of R1 each be placed under the control of the Directors of the Company who are authorised, subject to the provisions of Sections 221 and 222 of The South African Companies Act, to allot and issue such shares in their discretion on such terms and conditions as they consider appropriate but subject always to the provisions of the Company's Articles of Association. This authority remains valid until the next annual general meeting of the Company to be held in May 1981. In addition, the Directors of the Company have been given specific authority by shareholders of the Company to allot 1,091,515 ordinary shares to the holders of the 7½ per cent. fixed rate preference shares – Series A and the variable rate preference shares – Series B who exercise the conversion rights attaching thereto. Assuming full conversion, the issued ordinary share capital of the Company would increase from 10,915,147 ordinary shares to 12,006,662 ordinary shares of R1 each.

Voting rights

Ordinary shareholders of the Company are entitled to one vote per share. The holders of the preference shares in issue are entitled to receive notice of, and to attend and vote – either in person or by proxy – at any general meeting of the Company provided that the right to attend and vote shall be suspended until and shall be fully operative only during such period as the preference dividend payable in respect of the preference shares, or any part thereof remains in arrear and unpaid, such period starting six months after the due date of the dividend; or if the business of such general meeting includes the consideration of a proposed resolution for the winding-up of the Company or which would directly affect any of the rights attaching to the preference shares or which would so affect the interests of the holders thereof, in which event they are entitled to receive notice of, and attend and vote, either in person or by proxy, at such general meeting in connection with such proposed resolution only. A proxy need not be a member of the Company.

Meetings

The quorum for general meetings of the Company is three members (of whom one member shall be the representative of Liberty Holdings) holding between them at least one-third of the issued ordinary share capital of the Company for the time being and present in person or by proxy but if at any adjourned meeting such quorum is not present the members present shall form a quorum.

Variation of rights

The rights attaching to any class of shares into which the capital of the Company is divided may be varied with the consent in writing of the holders of three-fourths of the issued shares of that class or with the sanction of a resolution passed at a separate general meeting of the holders of the shares of the class, and the provisions of The South African Companies Act shall mutatis mutandis apply to the resolution and meeting as if the resolution were a special resolution. Furthermore, to every such general meeting, the provisions of the Articles of Association relating to general meetings of the Company shall mutatis mutandis apply except that the quorum shall be two persons holding or representing by proxy one-half of the nominal amount of the issued shares of the class, but if at any adjourned meeting such quorum is not present, the members present shall form a quorum.

Major shareholder

The major shareholder of Liberty Life is Liberty Holdings which owns approximately 81 per cent. of its issued ordinary share capital. In addition, Liberty Holdings owns 600,000 variable rate preference shares – Series B and 11,124 7½ per cent. fixed rate preference shares – Series A. Assuming full conversion Liberty Holdings will hold approximately 79 per cent. of the issued ordinary share capital of Liberty Life as increased.

Save as disclosed herein, the Directors are not aware of any shareholder holding 5 per cent. or more of the issued share capital of any class of Liberty Life.

Dealings in Liberty Life shares

Liberty Life's ordinary shares, the 5,207,844 7 per cent. redeemable cumulative preference shares (ex conversion), the 7½ per cent. fixed rate preference shares – Series A and the variable rate preference shares – Series B, are all listed on The Johannesburg Stock Exchange. The latest price at which Liberty Life's ordinary shares were dealt in on The Johannesburg Stock Exchange on 7th April, 1981 was 2,400 cents. The latest prices at which Liberty Life's 7½ per cent. fixed rate preference shares – Series A and variable rate preference shares – Series B were dealt in on The Johannesburg Stock Exchange on 7th April, 1981 were 2,200 cents and 2,250 cents respectively.

The highest and lowest prices at which dealings in the ordinary shares of Liberty Life have taken place on The Johannesburg Stock Exchange in respect of the years 1976 to 1980 and during the period 1st January, 1981 to 7th April, 1981 were as follows:–

Year	High (cents per share)	Low (cents per share)
1976	940	750
1977	1,110	770
1978	1,300	1,008
1979	1,850	1,150
1980	2,275	1,575
1st Quarter – 1981	2,300	1,800
From 1st April, 1981	2,400	2,325

The highest and lowest prices at which dealings in the 7½ per cent. fixed rate preference shares – Series A and the variable rate preference shares – Series B, have taken place on The Johannesburg Stock Exchange since the date of the issue of such shares until 7th April, 1981 were as follows:–

	7½ per cent. fixed rate preference shares – Series A		Variable rate preference shares – Series B	
	High (cents per share)	Low (cents per share)	High (cents per share)	Low (cents per share)
3rd Quarter – 1980	2,200	2,125	2,200	2,200
4th Quarter – 1980	2,200	2,100	2,200	2,150
1st Quarter – 1981	2,200	1,900	2,000	1,850
From 1st April, 1981	2,200	2,200	2,250	2,250

Indebtedness of Liberty Life and its Subsidiaries

At the close of business on 31st March, 1981 Liberty Life had no borrowings, although it had an outstanding guarantee of R49,150,000 (£27,612,000) in respect of the indebtedness of a Subsidiary company. Its Subsidiaries had outstanding at that date debentures, mortgages and bank loans (repayable between 1981 and 2006) amounting in aggregate to R74,589,000 (£41,904,000), made up as follows:–

	Amount outstanding at 31st March, 1981 R (000)	£ (000)	Rate of interest per annum	Terms and conditions of repayment
Long term loans				
Nominal amount of debentures issued by Subsidiaries secured by mortgages over freehold property				
R4,500,000 Rapp & Maister Holdings Ltd. 1985/2004 (Less: R2,450,000 held by Liberty Life and issuing company)	2,050	1,152	10¼%	In 20 equal annual instalments commencing on 28th February, 1985.
R5,000,000 Rapp & Maister Holdings Ltd. 1982/2006 (Less: R1,311,000 held by Liberty Life and issuing company)	3,689	2,072	8½%	In 25 equal annual instalments commencing on 31st August, 1982.
R7,500,000 Bifon Properties (Pty.) Ltd. 1992/2006 (Less: R3,050,000 held by Liberty Life)	4,450	2,500	9¼%	In 15 equal annual instalments commencing on 30th June, 1992.
R9,500,000 Westaline Properties (Pty.) Ltd. 1987/2006 (Less: R2,130,000 held by issuing company)	7,370	4,141	9¾%	In 20 equal annual instalments commencing on 31st December, 1987.
	17,559	9,865		
Loans owing by Subsidiaries secured by mortgages over freehold property	3,237	1,818	Rates varying between 7¼% and 9½%	Varying terms of repayment terminating by not later than 20th November, 1998.
Total long term loans	20,796	11,683		
Medium term loans				
Nominal amount of debentures issued by Subsidiaries secured by deposit of listed shares				
R2,000,000 First Union General Investment Trust Limited 1983	2,000	1,124	8%	On 30th June, 1983.
Loans owing by Subsidiaries secured by mortgages over freehold property	1,578	887	Rates varying between 6¾% and 9.7%	Varying terms of repayment terminating by not later than 31st December, 1983.
Foreign Bank Loans				
Secured by certain listed shares	34,020	19,112	½% per annum over the London Interbank offered rate on £27,225,000 and 1% over Base Rate on £387,000	Repayable by not later than 23rd October, 1982.
Unsecured	15,130	8,500		Repayable by not later than 19th January, 1983.
Other (unsecured)	1,065	598	¼% per annum over the rate of interest payable by the bank concerned for raising the relevant currency	Repayable by not later than 28th February, 1982 subject to renewal from time to time.
Total medium term loans	53,793	30,221		
Total borrowings of Subsidiaries at 31st March, 1981	74,589	41,904		

Save as aforesaid, and apart from inter-company liabilities and guarantees within the Group, no company in the Group had outstanding, at that date, any loan capital nor any loan capital created but unissued, and no outstanding debentures, mortgages, charges or other loan capital or other borrowings or indebtedness in the nature of borrowings, including bank overdrafts, liabilities under acceptances other than normal trade bills, or acceptance credits, hire purchase commitments or guarantees or other material contingent liabilities.

Details of certain major properties

Guardian Liberty Centre

Present Head Office of the Liberty Life Group, completed in 1972. A modern 21-storey air-conditioned office building situated in Braamfontein, Johannesburg, comprising approximately 149,000 square feet of office and banking space.

Proposed head office for the Liberty Life Group

In 1980 Liberty Life acquired a 9 acre site in Braamfontein, Johannesburg, upon which will be erected a functional low-rise administration centre for the Liberty Life Group, to be known as the "Liberty Life Centre". In the initial stages, only the 5 acre eastern section of the site will be utilised and The South African Breweries Limited has leased from Liberty Life the balance of the site on which their present headquarters are situated. It is anticipated that the construction of the complex will be completed in the middle of 1982 and will initially provide approximately 294,000 square feet of accommodation with the capacity of ultimately increasing this area to 540,000 square feet.

The Sandton City regional shopping and office complex (60 per cent. owned)

This development, completed in 1973, which is situated on a 21 acre site in the central business district of Sandton, on the northern boundary of Johannesburg, consists of a modern 21-storey air-conditioned office tower and regional shopping centre comprising approximately 248,000 square feet of office space and 420,000 square feet of retail space which is fully let to a wide variety of tenants.

A major programme of expansion of Sandton City is being undertaken at an estimated total cost of R90,000,000 (£51,000,000), which will bring the retail size of the Sandton Shopping Complex to approximately 950,000 square feet, more than doubling the overall size of the shopping facilities presently offered. Approximately 75 per cent. of the retail extension has already been let. An agreement has been reached with the Southern Sun Hotel Group, South Africa's leading hotel chain, for the erection of a major five-star hotel as an integrated part of the complex. The shopping centre, hotel and additional offices to be erected as part of the overall extension, together with parking for 5,500 cars will then comprise the major portion of the central business district of Sandton.

Eastgate regional shopping centre

This major regional shopping centre, which was completed in 1979, is situated on a 51 acre site on the eastern boundary of Johannesburg. This development is the largest of its kind in the Southern Hemisphere and comprises approximately 926,000 square feet of air-conditioned retail space, all of which is fully let. Tenants include most of the Republic's major retailers.

Bank of Lisbon building

This 23-storey modern air-conditioned office block, erected in 1972, is situated in the financial district of Johannesburg and comprises approximately 263,000 square feet of office space and banking facilities.

20 Anderson Street

This 19-storey modern air-conditioned office block, completed in 1972, is situated in the financial district of Johannesburg and comprises approximately 205,000 square feet of office space.

Rennie House

An 18-storey modern air-conditioned office block, completed in 1975, situated in Braamfontein, Johannesburg, and comprising 269,000 square feet of office space. Since the end of 1980, Liberty Life has acquired a 1.5 acre site lying between the proposed new Head Office and Rennie House, which will give Liberty Life an unbroken frontage on the Braamfontein Ridge of 600 yards stretching from the Johannesburg Civic Theatre on the east to the Witwatersrand University on the west.

National Board House

A 17-storey air-conditioned office block incorporating shopping facilities situated in the central business district of Johannesburg and comprising approximately 163,000 square feet of lettable space.

The Federated Properties Group properties

Fourteen strategically located retail properties which are let on long-term leases to O.K. Bazaars (1929) Limited, one of South Africa's major retail chains, at rentals predominantly linked to the turnover achieved by each of the stores.

Main Central

An 18-storey modern air-conditioned office building incorporating shopping facilities, situated in the central business district of Johannesburg comprising 104,000 square feet of office and retail space.

Various hypermarket shopping centres

Interests are also held in various major hypermarket shopping complexes situated in Durban, Johannesburg, Port Elizabeth and other centres of the Republic which have been leased on long-term leases to South Africa's major retailers.

Publication of accounts and Auditors

The consolidated financial statements of Liberty Life have and will be prepared in accordance with generally accepted accounting principles in the Republic and in terms of the accounting policies adopted by the Company (details of which are set out in the Company's annual financial statements), and in accordance with the provisions of the relevant South African statutes in the manner prescribed for insurance companies.

Kessel Feinstein, Chartered Accountants (S.A.), act as the auditors of Liberty Life and report on the consolidated financial statements of the Liberty Life Group.

Share registers

Registers in respect of the ordinary shares, 7½ per cent. fixed rate preference shares – Series A, and variable rate preference shares – Series B in the Company will be maintained by the registrars in Johannesburg, and duplicates of the United Kingdom registers by the transfer secretaries in the United Kingdom. Subject to any applicable exchange control regulations, shareholders with registered addresses in Africa south of the Equator will be serviced by the registrars in South Africa and shareholders with addresses in other countries will be serviced by the transfer secretaries in the United Kingdom. Share certificates of the Company in respect of the aforementioned ordinary and preference shares issued in Johannesburg will be good delivery on The Stock Exchange, London and similarly such ordinary and preference share certificates issued in the United Kingdom will be good delivery on The Johannesburg Stock Exchange.

Declaration and payment of dividends and closing of share registers

Ordinary shares

The interim dividend payable in respect of the ordinary shares is normally declared on the last Wednesday of August, payable in the second week of the following October, and the final dividend is normally declared on the first Wednesday falling on or after 27th February, payable in the second week of the following April.

For the purpose of determining the ordinary shareholders of the Company entitled to participate in:–

– the interim dividend, the ordinary shareholders' register is normally closed in the second half of September for approximately two weeks;

– the final dividend, the ordinary shareholders' register is normally closed in the second half of March for approximately two weeks.

Preference shares

7½ per cent. fixed rate convertible redeemable cumulative preference shares – Series A, and variable rate convertible redeemable cumulative preference shares – Series B.

The dividends payable in respect of the 7½ per cent. fixed rate preference shares – Series A and the variable rate preference shares – Series B, will be payable on 31st March and 30th September.

For the purpose of determining the holders of the fixed and the variable rate preference shares entitled to participate in the preference dividend to be declared in respect of:–

– the six month period ending 31st March each year, the preference shareholders' register will be closed in the middle of March for a period of one week;

– the six month period ending 30th September each year, the preference shareholders' register will be closed in the middle of September for a period of one week.

Shareholders' meeting

The Annual General Meeting of the Company is normally held towards the end of May of each year at the Company's South African registered office, 21st Floor, Guardian Liberty Centre, 39 Wolmarans Street, Braamfontein, Johannesburg.

Timetable of important dates

Financial year end of the Company – 31st December.

Announcement of results of the Company:–

Half-year results and declaration of interim ordinary dividend – Last Wednesday in August each year.

Full year results and declaration of final dividend – First Wednesday falling on or after 27th February of each year.

Despatch of Annual Report – Last week of March.

South African exchange control regulations

South African exchange control regulations currently provide:–

Purchases and sales

Any ordinary shares, 7½ per cent. fixed rate preference shares – Series A, or variable rate preference shares – Series B in the Company acquired or disposed of by a non-South African resident on The Stock Exchange, London, will be for settlement in accordance with the normal rules and regulations of The Stock Exchange, London, and at a price which will inter alia, take into account the current financial Rand exchange rate. The proceeds resulting from the sale of any Liberty Life ordinary or convertible preference shares effected on The Johannesburg Stock Exchange by a non-South African resident will be settled in accordance with financial Rand procedures. Financial Rand currently stands at a discount to commercial Rand. Financial Rand is freely transferable between non-South African residents through normal banking channels or through members of The Johannesburg Stock Exchange or The Stock Exchange, London.

Rights issues

Financial Rand may be utilised to take up additional shares issued to non-South African residents in respect of rights which have accrued in respect of an existing holding of shares listed on The Johannesburg Stock Exchange, provided however that the new shares are of the same class and in the same company as the shares in respect of which the rights have accrued and that they rank pari passu with the existing class of shares in question.

Dividends

Dividends declared in respect of South African shares held by non-South African residents are freely transferable through normal banking channels in commercial Rand.

Taxation

South Africa

Persons and companies not ordinarily resident nor carrying on business in the Republic are exempt from normal tax on dividends received from South African sources.

A South African withholding tax, the non-resident shareholders' tax is charged, inter alia, on dividends paid or payable by any company to a person, other than a company not ordinarily resident nor carrying on business in the Republic and on dividends paid or payable to any company that is not a South African company.

The non-resident shareholders' tax is generally charged at a flat rate which is currently 15 per cent. on so much of the dividend that is attributable to profits derived from South African sources.

In terms of double taxation agreements entered into by the South African Government with other governments, the non-resident shareholders' tax may be reduced to less than 15 per cent. and in terms of certain agreements, no non-resident shareholders' tax is payable.

Profits derived from the sale outside South Africa of shares by a non-resident of South Africa or a non-South African company or from the sale of shares within South Africa by a non-resident of South Africa as an occasional transaction or by a non-South African company not having a permanent establishment in South Africa are in general not subject to South African tax.

South African estate duty at progressive rates may be payable on large estates of a deceased non-South African resident person on property, including shares, situated or deemed to be situated in South Africa. For this purpose shares in a South African company which maintains a section of the register in the United Kingdom will be deemed to be situated in South Africa.

United Kingdom

United Kingdom income tax is deducted on payment of dividends in the United Kingdom to United Kingdom residents. Under the terms of the Convention for the Avoidance of Double Taxation between the Republic of South Africa and the United Kingdom, South African tax payable may be allowed to United Kingdom residents as a credit against any United Kingdom income tax payable in respect of such dividends.

An individual who is resident or ordinarily resident in the United Kingdom or a company which is resident in the United Kingdom or any individual or company carrying on a trade in the United Kingdom through a branch or agency, who or which disposes of shares may incur a liability to United Kingdom capital gains tax or corporation tax in respect of chargeable gains or to capital transfer tax depending upon the circumstances of the shareholder concerned.

Any person who is in doubt about his liability to United Kingdom tax should consult a professional adviser.

Directors of the Company

Remuneration

The aggregate of the remuneration paid to the Directors of the Company for the year ended 31st December, 1980 amounted to R260,000 (£146,000) including R244,000 (£137,000) paid to executive Directors of the Company. The remuneration to be paid to the Directors of the Company in respect of the financial year ending 31st December, 1981 is not expected to be materially different from the previous year, save for normal salary increments.

Directors' fees are paid out of the funds of the Company at such rates as are determined by the shareholders in general meeting from time to time.

Service contracts

None of the Directors of Liberty Life has a service contract with the Company or any of its Subsidiaries.

Certain provisions relating to the Directors of the Company in the Articles of Association

Various provisions of Liberty Life's Articles of Association relevant to the Directors are summarised below:–

Directors' Interests in Contracts No Director, or intending Director, is disqualified by his office from contracting with the Company, either with regard to such office or as a vendor, purchaser, or otherwise, nor will any such contract or any contract or arrangement entered into by or on behalf of the Company, in which any Director is in any way interested, be avoided, nor will any Director so contracting or being so interested be liable to the Company for any profit realised by any such contract or arrangement by reason of such Director holding that office, or of the fiduciary relationship thereby established, but the nature of his interest must be declared by him in accordance with the provisions of The South African Companies Act.

Furthermore, no Director may, as a Director, vote in respect of any contract or arrangement in which he is interested in the manner set out above, and if he votes, his vote will not be counted, nor will he be counted for the purpose of any resolution regarding such vote in the quorum present at the meeting, but these prohibitions do not apply, inter alia, to:–

(i) any contract or dealing with a company of which the Directors of the Company or any of them may be directors, members, managers, officials or employees or otherwise interested;

(ii) any contract by or on behalf of the Company to give to the Directors or any of them any security by way of indemnity, or in respect of advances made by them or any of them;

(iii) any resolution to allot shares in or debentures or other obligations of the Company to any Director of the Company or to any matter arising out of such resolution.

The above prohibitions may at any time be suspended or relaxed by the Company in general meeting.

Borrowing powers The Directors are empowered to borrow or raise funds for the purpose of the Company.

The Directors are obliged to procure (but as regards Subsidiaries of the Company only insofar as by the exercise of voting and other rights or powers of control exercisable by the Company they can procure) that the aggregate principal amount at any one time outstanding in respect of moneys borrowed or raised by the Group being the Company and all the Subsidiaries for the time being of the Company (excluding inter-Group borrowings but including the principal amount secured by any outstanding guarantees or suretyships given by the Company or any of its Subsidiaries for the share capital or indebtedness of any other company or companies whatsoever and not already included in the aggregate amount of the moneys so borrowed or raised) may not without previous sanction of an ordinary resolution of the Company exceed the aggregate of the nominal amount of the issued and paid-up share capital for the time being of the Company (subject to any variations therein since the date of the last financial statements referred to above) and the aggregate amount standing to the credit of any capital and revenue reserve accounts, any share premium account and the profit and loss or unallocated surplus account as set out in the group consolidated balance sheet of the Company and its Subsidiaries, certified by the Company's auditors.

No such sanction is required to the borrowing of any moneys intended to be applied and actually applied within ninety days in the repayment (with or without any premium) of any moneys then already borrowed and outstanding and notwithstanding that the new borrowing may result in the above-mentioned limit being exceeded.

Notwithstanding anything to the contrary hereinbefore contained:–

the borrowing powers of the Company are subject to the provisions of the South African Insurance Act, 1943, as amended, which provides that an insurer may not effect any borrowings nor guarantee any debts or obligations except with the consent of and to the extent permitted by the Registrar of Insurance;

the aggregate amount at any time owing by the Company in respect of borrowings may not exceed the amount authorised by its holding company.

Number of Directors The number of Directors may not be less than 4 and until otherwise determined by the Company in general meeting may not be more than 16.

Alternate Directors *Each Director shall have the power to appoint and remove a person approved by the Directors to act as his* alternate Director, provided that the appointment of such alternate Director shall be made in writing. An alternate Director, whilst acting in the place of the Director who appointed him, shall exercise and discharge all the duties and functions of the Director he represents for so long as the Director holds office.

Retirement age

In terms of the policy of the Liberty Life Group, a Director normally retires at the Annual General Meeting of the Company following upon his reaching the age of 70 years.

Disclosure of Directors' interests

The interests of the Directors, including their family interests, in the issued share capital of the Company at 31st March, 1981 were as follows:–

Direct interests

Name	Ordinary	7½% fixed rate preference shares – Series A	Variable rate preference shares – Series B
D. Gordon	nil	2,500	nil
M. L. Hilkowitz	nil	1,000*	nil
S. Handler	nil	1,000*	nil
M. Winterton	nil	1,000*	nil

*Held pursuant to the provisions of The Liberty Staff Share Trust (details of which are set out below under the appropriate heading).

The Directors of the Company had no non-beneficial shareholdings in the Company at 31st March, 1981.

Indirect interests

Mr. D. Gordon, Mr. E. F. Bigland, Mr. M. J. S. Newman (alternate), Dr. A. M. Conradie, Mr. H. P. de Villiers, Mr. P. R. Dugdale, Mr. E. P. Greenfield, Mr. J. L. S. Hefer, Mr. M. L. Hilkowitz, Mr. I. G. MacPherson and Mr. M. Rapp, all of whom are Directors of the Company are also Directors or alternate Directors of Liberty Holdings which holds 8,844,265 ordinary shares in Liberty Life being equivalent to approximately 81 per cent. of the ordinary share capital of Liberty Life, 600,000 variable rate preference shares – Series B and 11,124 7½ per cent. fixed rate preference shares – Series A. The Directors of Liberty Life together with their family interests, hold directly and indirectly, in aggregate 1,185,344 ordinary shares and 185,000 preference shares in Liberty Holdings made up as follows:–

Name	Number of shares: Ordinary	Preference
D. Gordon	26,200	140,000
E. F. Bigland	nil	nil
J. D. Brennan (alternate)	nil	nil
A. M. Conradie	1,000	nil
H. P. de Villiers	5,300	nil
P. R. Dugdale	nil	nil
E. P. Greenfield	500	nil
S. Handler	15,500	nil
J. L. S. Hefer	nil	nil
M. L. Hilkowitz	6,500	nil
I. G. MacPherson	1,000	nil
M. J. S. Newman (alternate)	nil	nil
M. Rapp	1,111,844	45,000
G. H. Watson	11,000	nil
M. Winterton	6,500	nil

Liblife Controlling Corporation owns 23,100,000 ordinary shares, equivalent to an approximate 52 per cent. equity interest in Liberty Holdings. The ordinary share capital of Liblife Controlling Corporation is owned indirectly as to 38.75 per cent. and 21.25 per cent. respectively by the family interests of Mr. D. Gordon and Mr. M. Rapp, as to 25 per cent. by Standard Bank Investment Corporation Limited ("Stanbic") and as to the balance indirectly by other Directors and senior executives of the Liberty Holdings Group.

Mr. D. Gordon and Mr. H. P. de Villiers are Directors and shareholders of Stanbic. The Standard Bank of South Africa Limited ("Standard") and Standard Merchant Bank Limited, which are wholly-owned subsidiaries of Stanbic, own the entire issued preference share capital of Liblife Controlling Corporation and 4,730,954 7 per cent. redeemable cumulative preference shares (ex conversion) of R1 each in Liberty Life. Mr. D. Gordon, Mr. E. F. Bigland, Mr. P. R. Dugdale and Mr. E. P. Greenfield, all of whom are Directors of Liberty Life, are also Directors and/or shareholders of GRE which owns 100,000 ordinary shares and 10,000 7½ per cent. fixed rate preference shares – Series A in Liberty Life, as well as 4,719,978 ordinary shares in Liberty Holdings and 51 per cent. of the ordinary shares of Guardian National. Certain Directors of Liberty Life are also Directors of Guardian National and its wholly-owned subsidiary, Guardian South Africa, which companies own, in aggregate, 1,054,000 preference shares in Liberty Holdings. Liberty Holdings in turn owns an 18.25 per cent. interest in the equity of Guardian National.

Certain Directors of Liberty Life are also Directors of Guardbank Management Corporation Limited (65 per cent. of the issued share capital of which is owned by Liberty Holdings) which owns 2,690 7½ per cent. fixed rate preference shares – Series A and 3,420 variable rate preference shares – Series B, in Liberty Life.

Directors' interests in the assets of the Group

No Director has or has had, within the two years preceding the date of this advertisement, any interest, direct or indirect, in any assets which have been or are proposed to be acquired or disposed of by or leased to Liberty Life or any of its Subsidiaries. No contracts or arrangements subsist or have subsisted within the two years preceding the date hereof in which a Director is or was materially interested and which is or was significant in relation to the business of the Group taken as a whole.

The Liberty Life Staff Share Trust ("The Share Trust")

In order to enable the Share Trust to acquire a holding of 300,000 7½ per cent. fixed rate preference shares – Series A, Liberty Life made a loan to the Share Trust of R6,000,000 in August 1980 to enable the Share Trust to acquire such convertible preference shares in Liberty Life. The loan bears interest at 7½ per cent. per annum, payable half-yearly in arrears on 31st March and 30th September each year until 30th September, 1988, on which date the loan is finally repayable. The Share Trust on-lent such funds to participants to enable them to acquire a holding of 7½ per cent. fixed rate preference shares – Series A in the Company. On the basis of the existing issued ordinary share capital of Liberty Life, and on the assumption that all the holders of the 1,091,515 convertible preference shares in issue (see further details under "Liberty Life's capital" above) exercise their conversion rights, participants in the Share Trust will, in due course, collectively own approximately 2.5 per cent. of Liberty Life's ordinary share capital, as increased.

In terms of the provisions of the Share Trust:–

the purchase price payable by the participants in the Share Trust will be payable from time to time, but in any event by not later than 30th September, 1988;

the purchase price owing from time to time by the participants in the Share Trust bears interest at 7½ per cent. per annum, payable half-annually in arrears on 31st March and 30th September of each year.

Unless otherwise agreed by the Trustees, participants who remain in the employ of the Liberty Life Group throughout the period, are entitled:–

to convert up to a maximum of 25 per cent. of their holding of convertible preference shares on 30th September, 1985;

to convert up to a maximum of a further 25 per cent. of their holding of convertible preference shares on 30th September, 1986;

to convert up to a maximum of a further 25 per cent. of their holding of convertible preference shares on 30th September, 1987;

to convert their entire holding (to the extent not previously converted) of convertible preference shares on 30th September, 1988.

The maximum number of convertible preference shares any one participant shall be entitled to receive shall not exceed 4,000.

Changes in the share capital of the Company and its Subsidiaries

The following table shows details of issues of share capital by Liberty Life and its principal Subsidiaries in the two years preceding the date of publication of this advertisement, (all of which were issued for cash), including commissions paid in connection therewith.

Name of issuer	Date of issue	Shares issued	Aggregate issue price	Commission
Liberty Life	8th August, 1980	464,607 7½% fixed rate convertible redeemable cumulative preference shares of R1 each (issued at R20 per share) – Series A yielding 7½% per annum on the issue price	R9,292,140	R75,000
Liberty Life	8th August, 1980	626,908 variable rate convertible redeemable cumulative preference shares of R1 each (issued at R20 per share) – Series B yielding initially 6½% per annum on the issue price (currently 7¼% per annum)	R12,538,160	
Fugit	11th October, 1979	12,420,000 ordinary shares of 25 cents each (issued at R1.20 per share)	R14,904,000	R85,728
Garsan	22nd December, 1980	10,000 ordinary shares of £1 each (issued at £1 per share)	£10,000	—

Save as set out above, and other than the issue of shares in Subsidiaries to the Company or to other Subsidiaries, no shares have been issued by the Company or any of its Subsidiaries within the period of two years immediately preceding the publication of this advertisement, nor is it presently proposed, except as aforesaid, to issue shares, otherwise than for cash.

Save for the amount of R75,000 which was paid by Liberty Life to Glicor for its services in handling the convertible preference share issue which was made by Liberty Life to its members, and save for the amount of R85,728 which was paid by Fugit to Liberty Life for underwriting that portion of the share issue attributable to the minority shareholders of Fugit which was made by Fugit to its members, no commissions, discounts, brokerages or other special terms were granted, within the two years immediately preceding the publication of this advertisement, in connection with the issue or sale of any capital of the Company or any of its Subsidiaries.

No loan capital of any company within the Liberty Life Group has, within the two years preceding the date hereof, been issued or is now proposed to be issued, otherwise than for cash.

No issue of shares will be made which will effectively alter the control of the Company without the prior approval of the Company in general meeting.

None of the shares of the Company or any of its Subsidiaries is under option nor has it been agreed, conditionally or unconditionally, to put any shares of the Company or any of its Subsidiaries under option. As set out above, the Share Trust was established in July 1980, and pursuant thereto the Directors were empowered to issue 300,000 7½ per cent. fixed rate preference shares – Series A for the purpose of resale by the Trust to selected employees of the Company (including executive Directors). All of these shares have already been allotted to the Share Trust which has, in turn, placed them with employees of the Liberty Life Group.

Save for the fact that the rights attaching to the unissued convertible preference shares in the capital of the Company were amended for the purpose of facilitating the issue of the 7½ per cent. fixed rate preference shares – Series A and the variable rate preference shares – Series B, referred to above, there have been no alterations in the share capital of the Company within the two years immediately preceding the publication of this advertisement.

Material contracts

During the period of two years immediately preceding the publication of this advertisement a wholly-owned Subsidiary of the Company entered into a contract on 19th February, 1980 (not being a contract entered into in the ordinary course of business) which may be considered material, for the subscription of 25 per cent. of the issued share capital of Montreal Life for a consideration of Can.$4,500,000.

Save as disclosed herein the only contracts entered into by Liberty Life and its Subsidiaries during the two years immediately preceding the date of publication of this advertisement are contracts entered into in the ordinary course of business.

No material litigation

Neither the Company nor any of its Subsidiaries is engaged in any litigation or claim which, in the opinion of the Directors, is or may be of material importance, nor is any such litigation or claim of material importance known to the Directors to be pending or threatened against Liberty Life or any of its Subsidiaries.

No material changes

Save as mentioned in this advertisement, there has been no material change in the financial or trading position of Liberty Life and its Subsidiaries other than in the ordinary course of business between 31st December, 1980, being the date of its latest published audited consolidated accounts, and the date of this advertisement.

Expenses of listing

The costs, charges and expenses of and incidental to this introduction are payable by Liberty Life and are estimated to amount to £130,000 (R231,000).

Consents

Kessel Feinstein, Chartered Accountants (S.A.), the auditors of Liberty Life and the Reporting Accountants, have given and have not withdrawn their written consent to the issue of this advertisement with the inclusion herein of their name and Report in the form and context in which they appear. Richard Ellis Dunlop Heywood have given and have not withdrawn their written consent to the issue of this advertisement with the inclusion herein of their name and references to their valuation in the form and context in which they appear.

Documents available for inspection

Copies of the following documents may be inspected at the offices of Linklaters & Paines, Barrington House, 59/67 Gresham Street, London EC2V 7JA, during normal business hours on any business day (Saturdays excepted) up to and including Friday, 15th May, 1981:–

(i) the Memorandum and Articles of Association of Liberty Life;
(ii) the consolidated financial statements and Directors' reports of Liberty Life for the six years ended 31st December, 1980;
(iii) the consents referred to above;
(iv) the Report of Kessel Feinstein;
(v) the valuation of Richard Ellis Dunlop Heywood;
(vi) the Liberty Life Staff Share Trust;
(vii) The South African Companies Act and Insurance Act; and
(viii) the contract referred to in Material Contracts above.

Principal definitions

"Fugit"	means First Union General Investment Trust Limited.
"Garsan"	means Garsan Limited of the United Kingdom.
"Glicor"	means Guardian Liberty Investment Corporation Limited.
"GRE"	means Guardian Royal Exchange Assurance Limited of the United Kingdom.
"Guardian National"	means Guardian National Insurance Company Limited.
"Guardian South Africa"	means Guardian Assurance Company South Africa Limited.
"Guardbank Management"	means Guardbank Management Corporation Limited.
"Liberty Holdings"	means Liberty Holdings Limited (known as Guardian Assurance Holdings (South Africa) Limited prior to 3rd October, 1978).
"Liberty Holdings Group"	means Liberty Holdings and its Subsidiaries including Liberty Life Association of Africa Limited and its Subsidiaries.
"Liberty Life" and "the Company"	means Liberty Life Association of Africa Limited.
"Liberty Life Group" and "Group"	means Liberty Life Association of Africa Limited and its Subsidiaries.
"Liblife Controlling Corporation"	means Liblife Controlling Corporation (Proprietary) Limited.
"Rand," "R" and "cents"	means the currency of the Republic of South Africa.
"Rapp & Maister"	means Rapp & Maister Real Estate Company (Proprietary) Limited and its wholly-owned Subsidiary, Rapp & Maister Construction (Proprietary) Limited.
"Real Estate Corporation"	means Real Estate Corporation of South Africa Limited.
"Republic" and "South Africa"	means the Republic of South Africa.
"The South African Companies Act"	means The South African Companies Act, 1973 as amended.
"Sterling," "£," "pence" and "p"	means the currency of the United Kingdom of Great Britain and Northern Ireland.
"Subsidiaries"	has the meaning ascribed to it in Section 1 of The South African Companies Act.

Exchange rate

The approximate middle market spot exchange rate between commercial Rand and Sterling on 31st December, 1980 was R1.78 to £1, and all Rand amounts translated into Sterling have been translated at such rate. On 7th April, 1981 (being the last practicable date before printing), the approximate middle market spot exchange rate was R1.77 to £1.

LONDON,
22nd April, 1981.

Companies and Markets

INTL. COMPANIES & FINANCE

Sulzer to reorganise after drop in profit

By John Wicks in Zurich

SULZER BROTHERS, the Swiss engineering group, has introduced a sweeping reorganisation scheme to improve its overall profitability, as well as a programme to concentrate more specifically on promising product groups and to cut operating costs.

Details of the group's plans were given by Herr Artur Frauenfelder, the deputy president, shortly after the company had announced a cut in its dividend from 14 to 10 per cent following a drop in consolidated earnings of 17 per cent last year to SwFr 29m ($14.6m). Parent company profits fell from SwFr 32.72m ($16.5m) to SwFr 25.6m.

Group sales last year amounted to SwFr 3.8bn, yet the return on this figure was only 0.76 per cent, a level which Herr Frauenfelder said was far below what Sulzer regards as satisfactory. For the current year, however, the company expects no marked improvement in profitability.

Herr Frauenfelder expressed his disappointment at the "poor" results for 1980 and said the company had hoped for a recovery after the unsatisfactory showing in the previous year. It was uncertain, he added, whether 1981 profits would permit a return to the 14 per cent dividend plus sufficient formation of new reserves.

The generally high level of orders on hand means that most plants within the group can expect secure employment this year. New orders rose by 29 per cent in 1980 to SwFr 4.54bn ($2.29bn)

SKF to raise SKr270m by one-for-five rights

BY WILLIAM DULLFORCE, NORDIC EDITOR, IN STOCKHOLM

SKF, the Swedish multinational engineering group, is well armed to consolidate its lead in the world ball and roller bearing market after the reorganisation of its European business between 1972 and 1978. But it can reap more from tighter capital control of current assets and better utilisation of plant and property.

This appraisal by the SKF board of directors is contained in a new 3.6m rights issue announced today. Shareholders are being offered one share of a new C series for every five A or B shares held, at a price of SKr 75 a share compared with the nominal value of SKr 50.

The C shares will carry a fixed dividend of SKr 12 a share. They will be converted into B shares when the dividend on the A and B shares reaches SKr 12, but in any case not later than in 1991.

SKF paid a dividend of SKr 7 a share last year, a rise of SKr 1, after more than doubling group pre-tax profit (before exchange differences) to SKr 953m ($203m) on consolidated sales of SKr 12.5bn.

The issue will raise SKr 270m ($57.5m) and will increase the group's share capital to SKr 1.08bn. This reinforcement of the capital base, the first since 1975, is regarded as necessary to "secure freedom of action when opportunities arise"; to help finance product development; and to provide a more forceful application of rationalisation and new technology, the offer to shareholders states.

Slower sales growth, of between 5 and 10 per cent, and a moderate decrease in profit margins are forecast for 1981 as a result of a slackening in the market, particularly in demand from the car industry.

However, the board estimates that sales development can exceed market growth during the next business cycle. This together with continued rationalisation and improvement of systems should "make it possible for SKF to fulfil its expectation of a return on total assets of 3 per cent above the weighted inflation rate in the group's major markets."

The group currently supplies almost 20 per cent of the western world's ball and roller bearing requirements.

Canadian oil subsidiaries warn of lower earnings

BY ROBERT GIBBENS IN MONTREAL

SEVERAL CANADIAN subsidiaries of multinational oil companies have warned that their profits will be sharply lower in 1981 because of the Ottawa Government's controversial national energy programme, and are trimming back exploration activity.

However Gulf Canada, the country's second-largest oil company, after Imperial Oil (Exxon), has confirmed for the first time that it might consider greater Canadian participation. Most Canadian affiliates of multinational oil companies are only about 30 per cent Canadian.

Gulf Canada, Hudson's Bay Oil and Gas (Conoco), Texaco Canada, BP Canada, and Shell Canada all reported first-quarter oil and gas earnings under strong pressure, and uncertainties are likely to continue through the year because of the pricing and jurisdictional dispute between Ottawa and Alberta. Returns from their western oil and gas production, particularly for BP Canada, are lagging in Saskatchewan because of higher federal taxes.

United Arab Shipping back in black

KUWAIT — United Arab Shipping Company, formed in 1976 as a Gulf joint venture, has reported profits of $75m for 1980, compared with a loss of $37m in 1979, AP-DJ reports.

Mr. Abdul Aziz Salat, the company's president, said that the profits were struck after depreciation of $44m. He attributed the swing back to the black to "improved conditions in the international shipping market, contined support for the company by the Gulf governments and the Gulf's private sector, as well as to control of operational and overhead costs."

PENDING DIVIDENDS

For the convenience of readers the dates when some of the more important company dividend statements may be expected in the next few weeks are given in the following table. The dates shown are those of last year's announcements, except where the forthcoming board meetings (indicated thus*) have been officially published. It should be emphasised that the dividends to be declared will not necessarily be at the amounts or rates per cent shown in the column headed "Announcement last year."

	Date	Announcement last year
Akroyd and Smithers	May 12	Int. 5.0
Allied Irish Banks	May 21	Final 3.5
Assoc. Paper Inds.	May 15	Int. 2.44
Aust. & NZ Bk.	May 19	Int. 12 cents
Avon Rubber	May 21	Int. 4.0
*BAT Inds.	Apr. 29	Int. 6.0
BOC Intl.	May 21	Int. 2.1
*Bank of Ireland	May 14	Final 11.5
*Berec	May 15	Final 4.195
*Blue Circle	Apr. 29	Final 8.7
Boots	May 22	Final 4.125
*Brit. Home Stores	May 11	Final 5.25
Brixton Estate	May 7	Final 1.4555
Brockhouse	May 22	Int. 2.0
Coates Patons	May 13	Final 2.6
Costain	May 6	Final 5.0
*Debenhams	May 29	Final 4.224
Duport	May 21	Final 3.116
Euro. Ferries	May 15	Final 3.0
*Foseco Minsep	Apr. 29	Final 3.76
French Kier	May 12	Final 1.27
*Gerrard Nat. Discount	Apr. 27	Final 6.5
*Hall (M.)	May 6	Final 5.46
*Hammerson Prop.	May 1	Final 12.0
*House of Fraser	Apr. 29	Final 4.0
Johnson and Firth Brown	May 14	Int. 1.3
*Kwik Save Discount	May 1	Int. 1.3
*Laing (J.)	May 1	Final 1.875
Land Secs.	May 19	Final 5.3
London and Northern	May 20	Final 2.1
*Marks and Spencer	May 20	Final 1.9
Mothercare	May 6	Final 3.38
*Mowlem (J.)	Apr. 30	Final 6.23
*Newarthill	Apr. 28	Final 6.0
Nurdin and Peacock	Apr. 28	Final 2.1
Pearson Longman	Apr. 22	Final 4.605
*Pearson (S.)	May 5	Final 6.25
*P & O	May 6	Final 4.0
*Philips Lamps	May 13	Final Fl.1.20
RHM	May 13	Int. 1.524
Readicut Intl.	May 19	Final 0.7
Redfearn Nat. Glass	May 20	Int. 5.28
Sainsbury (J.)	May 7	Final 7.25
Samuel (H.)	May 19	Final 5.524
Sears	May 7	Final 1.3
*Simon Eng.	Apr. 27	Final 7.33
Smurfit (Jeff.)	May 6	Final 6.438
*Tarmac	Apr. 28	Final 8.75
UDS	May 13	Final 2.61
Vaux Brews.	May 9	Int. 2.212
Whitbread	May 21	Final 4.35
*Wimpey (G.)	Apr. 30	Final 1.5

* Board meeting intimated. † Rights issue since made. ‡ Tax free. § Scrip issue since made. ¶ Forecast.

LOCAL AUTHORITY BOND TABLE

Authority (telephone number in parentheses)	Annual gross interest	Interest payable	Minimum sum	Life of bond
	%		£	Year
Knowsley (051-548 6555)	12½	½-year	1,000	1-2
Redbridge (01-478 3020)	12¾	½-year	200	6-7

Public Works Loan Board rates

Effective from April 25

Years	Quota loans repaid by EIP†	Quota loans repaid A‡	Quota loans repaid at maturity§	Non-quota loans A* repaid by EIP†	Non-quota loans A* repaid A‡	Non-quota loans A* repaid at maturity§
Up to 5	12⅞	13	13⅛	13⅜	13½	13⅝
Over 5, up to 10	13¼	13⅜	13⅝	13¾	14⅛	14⅜
Over 10, up to 15	13⅝	13⅝	13¾	14⅛	14⅛	14¼
Over 15, up to 25	13¾	13¾	13¾	14¼	14¼	14¼
Over 25	13¾	13¾	13½	14¼	14¼	14¼

* Non-quota loans B are 1 per cent higher in each case than non-quota loans A. † Equal instalments of principal. ‡ Repayment by half-yearly annuity (fixed equal half-yearly payments to include principal and interest). § With half-yearly payments of interest only.

Based on bargains recorded in SE Official List

BASE LENDING RATES

A.B.N. Bank 12 %	■ Hambros Bank 12 %
Allied Irish Bk. 12 %	Heritable & Gen. Trust 12 %
American Express Bk. 12 %	■ Hill Samuel §12 %
Amro Bank 12 %	C. Hoare & Co. †12 %
Henry Ansbacher 12 %	Hongkong & Shanghai 12 %
AP Bank Ltd. 12 %	Keyser Ullmann 12 %
■ Arbuthnot Latham 12 %	Knowsley & Co. Ltd. 14 %
Associates Cap. Corp. 12 %	Langris Trust Ltd. 12 %
Banco de Bilbao 12 %	Lloyds Bank 12 %
BCCI 12 %	Mallinhall Limited 12 %
Bank of Cyprus 12 %	Edward Manson & Co. 13 %
Bank of N.S.W. 12 %	Midland Bank 12 %
Banque Belge Ltd. 12 %	■ Samuel Montagu 12 %
Banque du Rhone et de la Tamise S.A. 12½ %	■ Morgan Grenfell 12 %
Barclays Bank 12 %	National Westminster 12 %
Beneficial Trust Ltd. 13 %	Norwich General Trust 12 %
Bremar Holdings Ltd. 13 %	P. S. Refson & Co. 12 %
Brit. Bank of Mid. East 12 %	Ryl. Bk. Canada (Ldn.) 12 %
■ Brown Shipley 12½ %	Slavenburg's Bank 12 %
Canada Perm't Trust 13 %	E. S. Schwab 13 %
Cayzer Ltd. 12 %	Standard Chartered ‖12 %
Cedar Holdings 12 %	Trade Dev. Bank 12 %
■ Charterhouse Japhet 12 %	Trustee Savings Bank 12 %
Choulartons 12 %	TCB Ltd. 12 %
C. E. Coates 12 %	United Bank of Kuwait 12 %
Consolidated Credits 12 %	Whiteaway Laidlaw 12½ %
Co-operative Bank *12 %	Williams & Glyn's 12 %
Corinthian Secs. 12 %	Wintrust Secs. Ltd. 12 %
The Cyprus Popular Bk. 12 %	Yorkshire Bank 12 %
Duncan Lawrie 12 %	
Eagil Trust 12 %	
E. T. Trust Limited 12 %	
First Nat. Fin. Corp. 14½ %	
First Nat. Secs. Ltd. 14½ %	
Robert Fraser 12 %	
Antony Gibbs 12 %	
Greyhound Guaranty 12 %	
Grindlays Bank ‡12 %	
■ Guinness Mahon 12 %	

■ Members of the Accepting Houses Committee.
* 7-day deposits 9%, 1-month 9¼%. Short term £4,000/12 months 11.85%.
† 7-day deposits on sums of £10,000 and under 9%, up to £50,000 9¾%, and over £50,000 10½%.
‡ Call deposits £1,000 and over 9%.
§ Demand deposits 9½%.
‖ 21-day deposits over £1,000 10½%.

Companies and Markets

CURRENCIES, MONEY and GOLD

Brokers at a discount

BY COLIN MILLHAM

NOT LONG ago money broking was an expanding business, while the more traditional area of the discount market seemed under something of a cloud. Some discount houses were expected to merge into fewer but bigger units, but all that has happened so far is that the number of houses has increased from 11 to 13.

It is now the money brokers who are going through a period of consolidation into bigger groups, illustrated by Charles Fulton's acquisition of Kirkland-Whittaker. Other recent mergers include Tullett and Riley's take-over of Nolton, and the purchase of Frazer May by Tradition to merge the business with City Deposit Brokers.

Charles Fulton, which is 42 per cent owned by Gill and Duffus, intends to maintain Kirkland-Whittaker as an autonomous entity under its existing management, obviously feeling that the two businesses are complementary and can be dovetailed together. Only time will tell how successful the new group will be, but it certainly seems an inevitable move as broking becomes much more competitive. While the foreign exchange brokers are also faced with the added competition supplied by Reuter's recently introduced money dealing service, which effectively by-passes the broker and encourages direct dealing between banks.

The other party involved in Kirkland-Whittaker's transfer of ownership is Gillett Brothers Discount Company, the last London discount house with a money broking subsidiary. Frazer May was once part of Union Discount, under the name of Udisco Brokers, and Astley and Pearce was the broking subsidiary of Gerrard and National Discount. Both these large houses sold their broking subsidiaries some time ago. But to Gillett Brothers, a much smaller house, the business of Kirkland-Whittaker appeared more important.

The Bank of England is unlikely to regret the sale of these subsidiaries by the discount houses, but it has never been clear whether any pressure was brought to bear from this quarter.

As far as Gillett Brothers is concerned, the company will now have over £2m, received from the sale of Kirkland-Whittaker, to invest in its traditional discount market activity. This could be very useful at a time when the authorities have made it obvious that the discount houses still have a major part to play within the banking system, despite the recent moves towards monetary base control.

THE POUND SPOT AND FORWARD

April 24	Day's spread	Close	One month	% p.a.	Three months	% p.a.
U.S.	2.1650-2.1740	2.1660-2.1670	0.60-0.70c dis	−3.60	2.10-2.20dis	−3.97
Canada	2.5830-2.5925	2.5835-2.5845	1.05-1.15c dis	−5.11	3.30-3.50dis	−5.26
Nethlnd.	5.23-5.27	5.25½-5.26½	1⅝-⅝c pm	2.57	2⅛-1¼ pm	1.33
Belgium	76.85-77.15	76.90-77.00	20-30c dis	−3.90	80-95 dis	−4.55
Denmark	14.85-14.89	14.86¼-14.87¼	¾ore pm-¾ dis	—	7¼-9¾ dis	−2.34
Ireland	1.2915-1.2955	1.2917-1.2927	0.34-0.47p dis	−3.76	1.02-1.16dis	−3.37
W. Ger.	4.71-4.74	4.71½-4.72½	⅜pf pm-⅛ dis	0.32	¼ pm-¼ dis	—
Portugal*	125.40-127.20	126.90-127.10	10c pm-60 dis	−2.36	15-190 dis	−3.23
Spain	191.00-191.55	191.00-191.20	80-105c dis	−5.81	260-305 dis	−5.91
Italy	2,349-2,359	2,350-2,352	11½-13½ lire dis	−6.38	40¾-43¾ dis	−7.19
Norway	11.88-11.92	11.89-11.90	2⅛-⅛ore pm	1.39	2-⅛ pm	0.40
France	11.16-11.24	11.22-11.23	⅛c pm-⅞ dis	−0.40	3¾-4½ dis	−1.51
Sweden	10.22½-10.26	10.23¼-10.24¼	n/a	—	n/a	—
Japan	464-469	465-466	2.40-2.10y pm	5.80	5.65-5.35 pm	4.73
Austria	33.25-33.40	33.30-33.35	7gro pm-2 dis	0.90	6 pm-4 dis	0.12
Switz.	4.29-4.32	4.29½-4.30½	1½-1c pm	3.49	3-2½ pm	2.56

Belgian rate is for convertible francs. Financial franc 78.35-79.00

Six-month forward dollar 4.15-4.25c dis, 12-month 6.70-6.90c dis.

THE DOLLAR SPOT AND FORWARD

April 24	Day's spread	Close	One month	% p.a.	Three months	% p.a.
UK†	2.1650-2.1740	2.1660-2.1670	0.60-0.70c dis	−3.60	2.10-2.20dis	−3.97
Ireland†	1.6735-1.6790	1.6760-1.6780	0.10c pm-par	0.36	0.20-0.30dis	−0.60
Canada	1.1927-1.1942	1.1927-1.1932	0.16-0.21c dis	−1.86	0.38-0.43dis	−1.36
Nethlnd.	2.4145-2.4230	2.4215-2.4230	1.43-1.33c pm	6.85	3.45-3.35 pm	5.63
Belgium	35.45-35.575	35.51-35.53	1-5c dis	−1.01	3-8 dis	−0.62
Denmark	6.8560-6.8660	6.8645-6.8660	2.25-1.75ore pm	3.50	3.25-2.75 pm	1.75
W. Ger.	2.1725-2.1820	2.1770-2.1780	0.94-0.88pf pm	5.01	2.16-2.10 pm	3.91
Portugal	58.40-58.80	58.50-58.65	20c pm-10 dis	1.02	50 pm-25 dis	0.85
Spain	88.14-88.33	88.28-88.33	5-15c dis	−1.36	15-35 dis	−1.13
Italy	1,085-1,087	1,085-1,087	2.10-2.60 lire dis	−2.60	8.00-8.75dis	−3.13
Norway	5.4825-5.5000	5.4900-5.4950	2.60-2.10ore pm	5.14	6.50-6.00 pm	4.56
France	5.1530-5.1750	5.1700-5.1750	1.83-1.73c pm	4.14	3.75-3.55 pm	2.83
Sweden	4.7200-4.7350	4.7200-4.7250	par-0.50ore dis	−0.63	par-0.50 dis	−0.21
Japan	214.70-215.60	214.70-214.80	1.75-1.60y pm	9.36	4.75-4.60 pm	8.71
Austria	15.30-15.42½	15.41½-15.42½	7.30-6.00gro pm	5.20	18.00-14.50pm	4.23
Switz.	1.93-1.99	1.9840-1.9850	1.29-1.19c pm	7.50	3.35-3.25 pm	6.65

† UK and Ireland are quoted in U.S. currency. Forward premiums and discounts apply to the U.S. dollar and not to the individual currency.

GOLD

	April 24		April 23	
Gold Bullion (fine ounce)				
Close	$494-497	(£228-229¾)	$490-493	(£224¼-225¾)
Opening	$490-493	(£225½-226¾)	$490-493	(£222½-226)
Morning fixing	$491.75	(£226.509)	$490.50	(£224.773)
Afternoon fixing	$494.50	(£227.618)	$488.50	(£223.980)
Gold Coins				
Krugerrand	$509-510	(£235-235½)	$505-506	(£231¼-231¾)
1/2 Krugerrand	$263-264	(£121¼-121¾)	$261-262	(£119½-120)
1/4 Krugerrand	$134-135	(£61¾-62¼)	$133-134	(£61-61½)
1/10 Krugerrand	$54¾-55¾	(£25¼-25¾)	$54½-55½	(£25-25½)
Mapleleaf	$505-506	(£233-233½)	$501-502	(£229½-230)
New Sovereigns	$123¾-124¾	(£57-57½)	$122¾-123¼	(£56-56½)
King Sovereigns	$139-141	(£64¼-65¼)	$139-141	(£63½-64½)
Victoria Sovs	$139-141	(£64¼-65¼)	$139-141	(£63½-64½)
French 20s	$181-184	(£83½-85)	$179-182	(£81½-83)
50 pesos Mexico	$612-616	(£282½-284½)	$606-611	(£277½-280)
100 Cor. Austria	$477-481	(£220-222)	$473-478	(£217½-220)
$20 Eagles	$591-596	(£273-275½)	$591-596	(£271-273½)

OTHER CURRENCIES

April 24	£	$		£ Note Rates
Argentina Peso	6740-6760	3110-3120	Austria	33.15-33.55
Australia Dollar	1.8755-1.8855	0.8670-0.8675	Belgium	78.75-79.55
Brazil Cruzeiro	175.39-176.39	80.95-81.35	Denmark	14.78-14.93
Finland Markka	9.02-9.04	4.1665-4.1675	France	11.12-11.22
Greek Drachma	113.154-116.026	52.75-52.90	Germany	4.71-4.75½
Hong Kong Dollar	11.62¼-11.64¼	5.3650-5.3680	Italy	2315-2375
Iran Rial	165.00*	76.50*	Japan	466-478
Kuwait Dinar (KD)	0.594-0.600	0.27540-0.27560	Netherlands	5.21½-5.26½
Luxembourg Frc.	76.90-77.00	35.51-35.53	Norway	11.86-11.98
Malaysia Dollar	5.02½-5.03½	2.3185-2.3205	Portugal	124-129
New Zealand Dlr	2.3985-2.4085	1.1080-1.092	Spain	186-197
Saudi Arab. Riyal	7.25-7.31	3.3595-3.3615	Sweden	10.24-10.34
Singapore Dollar	4.5825-4.5925	2.1145-2.1165	Switzerland	4.28-4.32
Sth African Rand	1.7583-1.7614	0.8116-0.8130	United States	2.15¾-2.17¾
U.A.E. Dirham	7.93-7.99	3.6720-3.6740	Yugoslavia	78½-81

Rate given for Argentina is free rate. * Selling rate.

FT LONDON INTERBANK FIXING (11.00 a.m. APRIL 24)

3 months U.S. dollars		6 months U.S. dollars	
bid 16 3/8	offer 16 1/2	bid 16 3/8	offer 16 1/2

The fixing rates are the arithmetic means, rounded to the nearest one-sixteenth, of the bid and offered rates for $10m quoted by the market to five reference banks at 11 am each working day. The banks are National Westminster Bank, Bank of Tokyo, Deutsche Bank, Banque Nationale de Paris and Morgan Guaranty Trust.

EURO-CURRENCY INTEREST RATES (Market closing Rates)

April 24	Sterling	U.S. Dollar	Canadian Dollar	Dutch Guilder	Swiss Franc	West German Mark	French Franc	Italian Lira	Belgian Franc Convertible	Japanese Yen
Short term	12⅛-12⅜	15½-15¾	16½-17½	9¾-10	4¾-5⅛	8⅝-8⅞	12-12¼	17-18½	17-18½	5¼-5¾
7 days' notice	12¼-12⅜	15⅝-15⅞	16½-17½	9¾-10	16¾-17¼	10⅞-11	11½-12	18-19½	16-18	5¾-6¼
Month	12[illegible]-12[illegible]	15[illegible]-16[illegible]	17¼-17½	10[illegible]-10[illegible]	9⅝-9¾	12-12⅛	12⅞-13⅛	18¼-19¼	16-17	6⅜-6[illegible]
Three months	12[illegible]-12[illegible]	16¼-16⅜	17¼-17½	10[illegible]-10[illegible]	9⅝-9¾	12[illegible]-12[illegible]	13⅜-13⅝	19-20	16½-17½	7¼-7½
Six months	12[illegible]-12[illegible]	16⅛-16⅜	16¾-17⅛	10[illegible]-10[illegible]	9⅛-9⅜	12¼-12⅜	13⅝-13⅞	19½-20½	16½-17½	7½-7¾
One Year	12[illegible]-12[illegible]	15⅝-15⅞	15¾-16⅛	10⅞-11	8¾-8⅞	11½-12	13⅝-13⅞	19¼-20¼	16-17	7¾-8

SDR linked deposits: one-month 13-13¾ per cent; three-months 13⅞-13¾ per cent; six-months 13[illegible]-13[illegible] per cent; one-year 13½-13⅞ per cent.

ECU linked deposits: one-month 12[illegible]-13[illegible] per cent; three-months 13[illegible]-13[illegible] per cent; six-months 13⅛-13½ per cent; one-year 12⅞-13¼ per cent.

Asian $ (closing rates in Singapore): one-month 15⅞-16 per cent; three-months 16¾-16½ per cent; six-months 16¼-16⅜ per cent; one-year 15[illegible]-15[illegible] per cent. Long-term Eurodollar two-years 15½-15⅝ per cent; three-years 15½-15⅝ per cent; four-years 15⅜-15⅝ per cent; five-years 15⅜-15⅝ per cent; nominal closing rates. Short-term rates are call for U.S. dollars, Canadian dollars and Japanese yen; others two-days' notice.

The following nominal rates were quoted for London dollar certificates of deposit: one-month 15.60-15.70 per cent; three-months 15.85-15.95 per cent; six-months 15.80-15.90 per cent; one-year 15.45-15.55 per cent.

LONDON MONEY RATES

April 24 1981	Sterling Certificate of deposit	Interbank	Local Authority deposits	Local Auth. negotiable bonds	Finance House Deposits	Company Deposits	Discount Market Deposits	Treasury Bills Φ	Eligible Bank Bills Φ	Fine Trade Bills Φ
Overnight	—	11-12¼	12⅛	—	—	11½	11½-12	—	—	—
2 days notice	—	—	12¼	—	—	—	—	—	—	—
7 days or	—	—	—	—	—	—	—	—	—	—
7 days notice	—	12-12¼	12¼-12⅜	—	12⅛	12½	11⅞-12	—	—	—
One month	12⅝-12[illegible]	12¼-12⅜	12¼	13⅜-13⅛	12⅜	12⅛	11⅞	11⅜	11[illegible]	12¾
Two months	12⅜-12[illegible]	12¼-12[illegible]	—	13⅛-12¾	12⅝	12⅝	11¾	11[illegible]	11[illegible]-11[illegible]	12½
Three months	12[illegible]-12[illegible]	12¼-12[illegible]	12¼	12⅞-12½	12⅝	12½	11⅝	11¼-11[illegible]	11[illegible]-11[illegible]	12¼
Six months	12[illegible]-12[illegible]	12⅛-12[illegible]	12-12⅛	12¾-12⅜	12[illegible]	12½	—	—	11[illegible]	11¾
Nine months	12[illegible]-12	12¼-12[illegible]	—	12⅝-12⅜	13½	12½	—	—	—	—
One year	12[illegible]-11[illegible]	12⅛-12[illegible]	12¼-12⅜	12⅜-12⅛	12½	12½	—	—	—	—
Two years	—	—	12¾-12[illegible]	—	—	—	—	—	—	—

Local authorities and finance houses seven days' notice, others seven days' fixed. Long-term local authority mortgage rates nominally three years 12¾-13 per cent; four years 13-13⅛ per cent; five years 13¼ per cent. ΦBank bill rates in table are buying rates for prime paper. Buying rates for four-month bank bills 11⅜ per cent; four-month trade bills 12⅛ per cent.

Approximate selling rate for one-month Treasury bills 11¼-11[illegible] per cent; two-months 11[illegible]-11⅛ per cent; three-months 11[illegible] per cent. Approximate selling rate for one-month bank bills 11⅝ per cent; two-months 11½-11[illegible] per cent; three-months 11⅜-11[illegible] per cent; one-month trade bills 12½ per cent; two-months 12¼ per cent and three-months 12 per cent.

Finance Houses Base Rates (published by the Finance Houses Association) 13 per cent from April 1, 1981. Clearing Bank Deposit Rates for sums at seven days' notice 9 per cent. Clearing Bank Rates for lending 12 per cent. Treasury Bills: Average tender rates of discount 11.2444 per cent.

CURRENCY RATES

April 24	Bank rate %	Special Drawing Rights	European Currency Unit
Sterling	12	0.556449	0.537537
U.S. $	13	1.20627	1.16500
Canadian $	17.40	1.43980	1.39056
Austria Sch.	6¾	18.5695	17.9527
Belgium F.	15	42.8829	41.2994
Danish K.	11	8.27138	7.99601
D mark	7½	2.62763	2.53778
Guilder	9	2.91736	2.81966
French Fr.	9½	6.22013	6.00734
Lira	19	1310.51	1265.49
Yen	6¼	269.951	251.117
Norwgn. Kr.	9	6.61760	6.39238
Spanish Pts.	8	106.393	102.935
Swedish Kr.	10	(U)	5.50464
Swiss Fr.	4	2.39625	2.31486
Greek Dr'ch.	20½	—	61.7404

RECENT ISSUES

EQUITIES

[illegible]

FIXED INTEREST STOCKS

[illegible]

"RIGHTS" OFFERS

[illegible]

UNIT TRUST SERVICE

OFFSHORE & OVERSEAS—contd.

[illegible]

FT UNIT TRUST INFORMATION SERVICE

AUTHORISED UNIT TRUSTS

Abbey Unit Tst. Mngrs. (a)
72-80, Gatehouse Rd., Aylesbury 0296 5941

Abbey Am. Gth. Tst.	59.5	64.0	.....	2.27
Abbey Capital	53.4	57.7xd	+0.9	3.81
Abbey General	61.5	66.5	+1.3	4.62
Abbey Gilt & F.I. Tst.	106.5	112.1xd	-0.1	11.69
Abbey Income	40.2	43.5xd	+0.6	8.07
Abbey W'w. Bd. Tst.	95.7	101.3	+0.9	6.61
Abbey Inv. Tst. Fd.	54.6	59.0	+0.2	4.87
Equitas Prog. Tst.	88.5	95.5	+1.8	4.28

Allen Harvey & Ross Unit Tst. Mngrs.
45, Cornhill, London EC3V 3PB. 01-623 6314

AHR Gilt Trust	87.2	91.7	+0.3	12.65

Allied Hambro Ltd. (a) (g)
Hambro Hse., Hutton, Brentwood, Essex.
01-588 2851 or Brentwood (0277) 211459

Balanced Funds				
Allied 1st	98.7	105.6	+1.5	5.30
Brit. Inds. Fund	86.0	92.0	+1.7	5.54
Growth & Income	56.5	60.3	+0.9	4.49
Elect. & Ind. Dev.	49.6	52.9xd	+1.0	4.73
Allied Capital	104.8	112.1xd	+1.7	3.93
Hambro Fund	145.6	155.8	+2.8	5.39
Hambro Acc. Fund	198.3	212.2	+3.7	3.86
Income Funds				
High Yield Fd.	74.4	79.6	+1.4	7.54
High Income	88.1	94.3xd	+1.5	6.79
Equity Income Fd.	51.0	54.6	+1.0	6.70
Govt. Secs.	26.1	26.8	.....	11.57
International Funds				
International	36.9	39.5	+0.2	2.10
Japan Fund	26.1	27.9	+0.1	0.23
Pacific Fund	72.2	77.3	+0.5	0.81
Secs. Of America	79.8	85.4	+0.2	1.87
Specialist Funds				
Smaller Co.'s Fd.	62.3	66.7	+0.8	3.90
2nd Smlr. Co's Fd.	76.7	82.1xd	+1.0	3.65
Recovery Sits.	152.2	162.8xd	+1.9	4.67
Met. Min. & C'dty.	69.3	74.2xd	+0.6	4.95
Overseas Earnings	75.6	80.9	+1.3	4.56
Exempt Funds				
Income Exempt	57.8	60.7	+1.2	7.00
Far East Exempt	76.0	79.0	+0.5	0.95
Smaller Co. Exempt	98.5	103.4xd	+0.9	3.87
U.S.A. Exempt	133.4	138.7xd	+0.3	2.24

Anderson Unit Trust Managers Ltd.
158, Fenchurch St., EC3M 6AA. 623 9231

Anderson U.T.	72.7	77.9xd	.....	3.19

Ansbacher Unit Mgmt. Co. Ltd.
1, Noble St., EC2V 7JA. 01-726 4931

Inc. Monthly Fund	154.0	164.0	.....	12.00
Leics. & Gen. Fd.	53.5	56.5	.....	—

Anthony Wieler Unit Tst. Mgmt. Ltd.
19, Widegate St., London, E1 7HP. 01-247 8827

Wieler Gwth Fd. Inc.	40.8	43.0	.....	3.35
Do. Accum.	52.0	54.7	.....	3.35

Arbuthnot Securities Ltd. (a)(c)
37, Queen St., London, EC4R 1BY. 01-236 5280

Capital	36.4	38.9	.....	—
Commodity	54.6	101.2	.....	2.57
(Accumulation)	148.0	158.3	.....	2.57
(10% Withdrawal)	71.4	76.3	.....	2.57
Eastern & Internatl.†	46.6	50.2	.....	1.00
(6% Withdrawal)	31.9	34.4	.....	1.00
Extra Income	100.9	108.5	+1.0	9.08
(Accumulation)	120.5	129.6	+1.2	9.08
Finance & Property	28.1	30.3	.....	3.58
Foreign††	142.7	148.7	.....	1.00
Giants	51.5	55.1	+1.4	4.19
(Accumulation)	67.4	72.1	+1.9	4.19
Gilt & Fixed	43.1	45.2	.....	12.01
(Accumulation)	46.6	48.9	-0.1	12.01
Growth	46.0	49.2	+0.6	4.00
(Accumulation)	60.5	64.7	+0.5	4.00
High Income	39.1	41.8	+0.5	8.65
(Accumulation)	66.4	71.0	+0.8	8.65
(7½% Withdrawal)	51.9	55.5	+0.7	8.65
High Yield	45.5	49.0	+0.2	10.01
(Accumulation)	81.9	88.1	+0.3	10.01
North American††	39.1	42.1	.....	1.00
Preference	21.6	23.3xd	.....	13.79
(Accumulation)	43.9	47.3xd	.....	13.79
Smaller Companies	41.5	43.1	+0.9	3.16

Crescent Unit Tst. Mngrs. Ltd. (a)(g)
4 Melville Cres., Edinburgh 3 031-226 4931

Cres. Amer. Fd.	44.4	47.9	+0.4	0.52
Cres. Internat'l.	86.1	93.0	+0.7	1.68
Cres. High. Dist.	49.6	53.5	+1.1	8.88
Cres. Reserves	55.1	59.5	+1.1	4.98
Cres. Tokyo	35.3	38.1	+0.4	0.92

Dartington Unit Trust Mngt. Ltd.
Bridge Chambers, Barnstaple, Devon 0271 76324

Total Perf. Unit Tst.	23.6	25.0xd	.....	8.70

Discretionary Unit Fund Managers
36/38 New Broad St, EC2M 1NU. 01-638 4485

Disc. Inc. April 9	252.6	269.4	.....	4.83

E. F. Winchester Fund Mngt. Ltd.
44, Bloomsbury Square, WC1A 2RA. 01-623 8893

Great Winchester	19.8	21.9	.....	6.45
Gt. Winchester O'seas	29.3	32.6	.....	3.26

For Emson and Dudley see Robert Fraser Tst. Mgmt.

Equity & Law Un. Tr. M.♥ (a)(b)(c)
Amersham Rd., High Wycombe 0494 33377

Equity & Law	97.1	102.2xd	+2.0	4.24

Fidelity International Management Ltd.
62-63 Queen St, London EC4 1AD 01-248 4891

American (z)	40.7	43.8	+0.5	0.56
Ameri Spec Sits. (z)	29.6	31.9	+0.5	0.35
Gilt + Fixed Int.	25.1	26.3xd	.....	11.94
Growth + Income	36.3	39.1	+0.5	6.12
Maximum Inc. Eq. Tst.	31.0	33.4	+0.7	8.09
Special Sits.	44.0	47.4	+0.4	1.60

James Finlay Unit Trust Mngt. Ltd.
10-14, West Nile Street, Glasgow 041-204 1321

J. Finlay Internat'l	41.3	44.4xd	.....	1.75
Accum. Units	51.2	55.1xd	.....	1.75
J. Finlay High Income	38.6	41.5xd	.....	9.25
Finlay Wld. Energy	17.9	19.2xd	.....	1.38
Accum. Units	23.1	24.8xd	.....	1.38
J. Finlay Fd. In. Tst.	41.1	44.2xd	.....	4.92
Accum. Units	53.3	57.3xd	.....	4.92

Prices on April 22. Next dealing April 29.

Framlington Unit Mgt. Ltd. (a)
64, London Wall, EC2M 5NQ. 01-628 5181

Amer. & Gen.	88.2	94.2	+1.0	0.72
Am. T'around	82.4	88.0	+1.1	1.38
Capital Tst.	67.6	72.2xd	+1.0	4.60
(Accum. Units)	71.4	76.2	+1.0	4.60
Convertible & Gilt	50.2	52.8	+0.2	9.56
(Accum. Units)	50.2	52.8	+0.2	9.56
Extra Income Trust	58.8	62.8	+1.0	8.39
Income Tst.	46.8	50.0	+0.8	6.88
Int. Growth Fd.	69.4	74.2xd	+0.6	1.57
(Accum. Units)	74.8	80.0	+0.8	1.57

Robert Fraser Trust Mgt. Ltd.
28b Albemarle St., W.1. 01-493 3211

Robt. Fraser Ut. Tst.	87.1	93.7xd	.....	6.00

Friends' Provdt. Trust Mgrs. (a) (b) (c).
Pixham End, Dorking. 0306 5055

Friends Prov. Units	71.4	76.3	+1.2	3.83
Do. Accum.	102.8	109.9	+1.8	3.83

Funds in Court*
Public Trustee, Kingsway, WC2. 01-405 4300

Capital April 15	145.8	148.7xd	.....	4.71
Gross Inc. April 15	86.0	88.3	.....	10.88
High Yield April 15	98.9	104.3	.....	9.97

*Unauth. Restricted to monies under Court control.

G.T. Unit Managers Ltd.♥
16, Finsbury Circus, EC2M 7DJ. 01-628 8131

G.T. Cap. Income	167.2	179.7	+3.9	1.80
Do. Acc.	214.8	230.9	+4.9	1.80
G.T. Inc. Fd. Un.	228.9	246.3	+4.0	7.60
G.T. U.S. & Gen.	230.1	247.4	+2.0	1.30
G.T. Wld. Bd. Fd.	97.1	101.1	+0.1	5.90
G.T. Japan & Gen.	110.1	118.3	+2.4	1.30
♦Gt. Pens. Ex. Fd.	380.0	430.0	+8.9	1.40
G.T. Int'l. Fund	262.1	281.9	+4.1	1.70
G.T. Four Yds. Fd.	64.2	69.0	+1.2	6.00
G.T. Far East & Gen.	102.1	109.8	+1.6	1.20

G. & A. Trust (a) (g)
5 Rayleigh Road, Brentwood (0277) 227300

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CORPORATION LOANS

1Ja.A.J.O.		D. 3½pc Irred.	25¾xd	2.3	13.89	—
15M	15N	Lon. Corp. 13¼pc '83	100½	15.4	13.18	13.00
1A.	10.	Do. 9½pc '84-85	88½	2.3	10.44	12.66
15M	15S	L.C.C. 5½pc '77-81	97⅞	16.2	5.65	11.93
15J	15J	Do. 5½pc '82-84	80½	15.12	6.83	12.99
1J	1D	Do. 5½pc '85-87	70¾	11.11	7.98	12.99
1OJa	10J	Do. 6¾pc '88-90	69¾	10.13	9.93	12.73
1M.J.S.D.		Do. 3pc '20 Aft.	23	3.11	13.47	—
15J	15D	Sunderland 12¼pc 1984	97¼	14.11	12.60	13.18

COMMONWEALTH AND AFRICAN LOANS

1A	10	Aust. 5½pc '81-82	94½	27.2	5.83	11.92
1J	1D	Do. 6pc 1981-83	87½	31.10	7.03	12.74
1Ja	1J	N.Z. 7¼pc 1988-92	67	1.12	11.16	13.36
15J	15D	Do. 7½pc '83-86	81¼	17.11	9.46	13.13
1M	1N	Sth. Africa 9½pc '79-81	96⅛	26.9	9.84	16.21
1A	10	S. Rhod. 2½pc Non-Ass.	159	3.66	—	—
—		Do. 5½pc 80-85 Asstd.	56	10.2	6.29	18.70
—		Do. 4½pc 87-92 Assrd.	57	7.1	12.45	18.80
—		Zimbabwe Ann (£100pa)	383	—	—	22.02

LOANS

Public Board and Ind.

Financial

FOREIGN BONDS & RAILS

AMERICANS

CANADIANS

F.My.Au.N.		Bk. Nova Scot. $1	[illegible]	[illegible]	[illegible]	—	[illegible]
A.Jy.O.Ja.		Bell Canada $8⅓	725p	26.3	$1.80	—	9.3
May	Nov.	Bow Valley‖	647p	10.12	10c	—	0.6
	Oct.	Brascan‖	13¼	26.3	$1.20	—	3.4
F.MyAuN.		Can.Imp.Bk. $2	11⅜	30.3	$1.88	—	5.9
July	Jan.	Can.Pacific $5	18⅝	15.9	$1.90	—	3.8
July	Jan.	Do. 4pc Deb. £100	30⅜	19.11	4%	—	13.2
	—	Can. P. Ent.‖	10	29.9	$1.12	—	4.2
J.Ap.Jy.O.		Gulf Can.‖	10	10.11	44c	—	1.6
Ap.Jy.O.Ja.		Hawker Sid. Can.‖	950p	14.11	96c	—	3.8
F.MyAuN.		Hollinger $5	18⅝	26.7	$2.20	—	4.4
Apr.	Oct.	Hudson's Bay ‖	960p	10.4	$1.20	—	4.7
Jan.	July	Hud.B.Oil G. $2½	915p	25.9	32c	—	1.3
Mr.Je.S.D.		Imperial Oil‖	13	23.2	$1.40	—	4.0
Jan.Ag.J.O.		Inco‖	990p	12.2	$US72c	—	3.2
F.My.Au.N.		Inl. Nat. Gas $1	635p	30.10	$1.00	—	5.9
Mr.Je.S.D.		Massey Ferg.‖	185p	11.77	—	—	—
	—	Place Gas $1	95p	—	—	—	—
June	Dec.	Rio Algom	15⅛	26.10	$1.50	—	3.7
M.Je.S.D.		Royal Bk. Can. $1	11⅞	26.1	$1.60	—	5.1
SeDeMrJu		Seagram Co. C$1	24⅞xd	19.2	US$1.40	—	2.5
F.MyAuN.		Tor. Dom. Bk. $1.	12¼	26.3	$1.60	—	4.7
J.Ap.Jy.O.		Trans Can. Pipe	20⅞	26.6	$1.16	—	19.3

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[illegible]

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[illegible]

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MINES—Continued

Australian

Dividends Paid	Stock	Price	Last xd	Div Net	Cvr	Yld Gr's
—	Acmex 50c	40	—	Q2.5c	—	3.3
—	ACM 20c	18	—	—	—	—

[illegible]

Tins

[illegible]

Copper

[illegible]

Miscellaneous

Dividends Paid	Stock	Price	Last xd	Div Net	Cvr	Yld Gr's
—	Anglo-Dominion	170	—	—	—	—
—	Eastman	44	—	—	—	—
May	Burma Mines 10p	20	30.3	0.75	0.9	5.4
—	Colby Res. Corp.	215	—	—	—	—
Aug. Feb.	Cons. Murch. 10c	250	30.6	tQ30c	1.8	6.6
—	††Hemerdon 10c	85	—	—	—	—
—	Highwood Res.	155	—	—	—	—
—	Northgate C$1	360	9.77	—	—	—
Jan. July	R.T.Z.	477	10.11	16.0	φ3.1	4.9
—	Do. 9½% Cv. Ln. '95-2000	£114	—	Q9½%	—	17.2
—	††SPD Minerals 10p	118	—	—	—	—
—	Sabina Inds. C$1	37	—	—	—	—
—	††SWCM 10p	34	—	—	—	—
—	Tara Expln. $1	505	—	—	—	—

NOTES

Unless otherwise indicated, prices and net dividends are in pence and denominations are 25p. Estimated price/earnings ratios and covers are based on latest annual reports and accounts and, where possible, are updated on half-yearly figures. P/Es are calculated on "net" distribution basis, earnings per share being computed on profit after taxation and unrelieved ACT where applicable; bracketed figures indicate 10 per cent or more difference if calculated on "nil" distribution. Covers are based on "maximum" distribution; this compares gross dividend costs to profit after taxation, excluding exceptional profits/losses but including estimated extent of offsettable ACT. Yields are based on middle prices, are gross, adjusted to ACT of 30 per cent and allow for value of declared distribution and rights.

- ● "Tap" Stock.
- * Highs and Lows marked thus have been adjusted to allow for rights issues for cash.
- † Interim since increased or resumed.
- ‡ Interim since reduced, passed or deferred.
- ‡‡ Tax-free to non-residents on application.
- φ Figures or report awaited.
- USM; not listed on Stock Exchange and company not subjected to same degree of regulation as listed securities.
- †† Dealt in under Rule 163(2)(a); not listed on any Stock Exchange and not subject to any listing requirements.
- ‡‡ Dealt in under Rule 163(3).
- Price at time of suspension.
- ¶ Indicated dividend after pending scrip and/or rights issue: cover relates to previous dividends or forecasts.
- ◆ Merger bid or reorganisation in progress.
- Not comparable.
- Same interim: reduced final and/or reduced earnings indicated.
- § Forecast dividend; cover on earnings updated by latest interim statement.
- Cover allows for conversion of shares not now ranking for dividends or ranking only for restricted dividend.
- Cover does not allow for shares which may also rank for dividend at a future date. No P/E ratio usually provided.
- φ Excluding a final dividend declaration.
- ** Regional price.
- ‖ No par value.

§§ Yield based on assumption Treasury Bill Rate stays unchanged until maturity of stock. Available only to UK pension schemes and insurance companies engaged in pension business. a Tax free. b Figures based on prospectus or other official estimate. c Cents. d Dividend rate paid or payable on part of capital; cover based on dividend on full capital. e Redemption yield. f Flat yield. g Assumed dividend and yield. h Assumed dividend and yield after scrip issue. j Payment from capital sources. k Kenya. m Interim higher than previous total. n Rights issue pending. q Earnings based on preliminary figures. s Dividend and yield exclude a special payment. t Indicated dividend: cover relates to previous dividend, P/E ratio based on latest annual earnings. u Forecast dividend: cover based on previous year's earnings. v Tax free up to 30p in the £. w Yield allows for currency clause. x Prospective real rate of return. y Dividend and yield based on merger terms. z Dividend and yield include a special payment: Cover does not apply to special payment. A Net dividend and yield. B Preference dividend passed or deferred. C Canadian. E Minimum tender price. F Dividend and yield based on prospectus or other official estimates for 1981-82. G Assumed dividend and yield after pending scrip and/or rights issue. H Dividend and yield based on prospectus or other official estimates for 1980-81. K Figures based on prospectus or other official estimates for 1981-82. M Dividend and yield based on prospectus or other official estimates for 1980. N Dividend and yield based on prospectus or other official estimates for 1981. P Figures based on prospectus or other official estimates for 1980-81. Q Gross. T Figures assumed. Z Dividend total to date.

Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all; xR ex capital distribution.

REGIONAL MARKETS

The following is a selection of London quotations of shares previously listed only in regional markets. Prices of Irish issues, most of which are not officially listed in London, are as quoted on the Irish exchange.

			IRISH		
Albany Inv. 20p	42	......			
Bertam	14	......	Conv. 9% '80-82	£99⅝	......
Bdg'wtr. Est. 50p	300	......	Nat. 9¼% 84/89	£75¾	......
Craig & Rose £1	£11¼	......	Fin. 13% 97/02	£80½	......
Fife Forge	53	......	Alliance Gas	75	......
Finlay Pkg. 5p	22	......	Arnott	250	......
Graig Ship. £1	£21	+½	Carroll (P.J.)	85	–1
Higsons Brew.	73	......	Concrete Prods.	94	......

[illegible]

OPTIONS

3-month Call Rates

[illegible]					
Cadburys	7½	N.E.I.	7	Brit. Petroleum	36
Courtaulds	6	Nat. West. Bank	32	Burmah Oil	16
Debenhams	8	P & O Dfd.	13	Charterhall	9
Distillers	17	Plessey	30	KCA	22
Dunlop	7½	Racal Elect.	34	Premier	18
Eagle Star	22	R.H.M.	5	Shell	34
F.N.F.C.	3½	Rank Org. Ord.	18	Tricentrol	30
Gen. Accident	30	Reed Intnl.	20	Ultramar	44
Gen. Electric	60	Sears	5		
Glaxo	28	Tesco	5½	Mines	
Grand Met.	14	Thorn EMI	30		
G.U.S. 'A'	44	Trust Houses	18	Charter Cons.	21
Guardian	32	Tube Invest.	18	Cons. Gold	45
G.K.N.	16	Turner & Newall	10	Lonrho	9
Hawker Sidd.	25	Unilever	50	Rio T. Zinc	45

"Recent Issues" and "Rights" Page 24

This service is available to every Company dealt in on Stock Exchanges throughout the United Kingdom for a fee of £500 per annum for each security

FINANCIAL TIMES
Monday April 27 1981

Farms hit by worst April blizzards of century

FINANCIAL TIMES REPORTER

BRITAIN'S FARMERS are counting the cost of the worst April blizzards this century. They struck as the *lambing season got into full swing.*

The bitter and blustery weather has played havoc with fruit and vegetable crops and may lead to a steep rise in the price of vegetables in the shops.

Farmers fear that, as rain melts the snow, there might be flooding which could affect fields freshly sewn with cereals and other crops.

The National Farmers Union said yesterday that many young lambs must have perished in the snow.

The lambs are especially vulnerable to sudden cold weather. They may quickly die from hypothermia and pneumonia, if not killed under drifts.

"This weather in the middle of lambing time could be a disaster for farmers. Even if they can get the ewes out of the snow they may still lose their lambs through shock. Lambs which are born in the snow will probably die," said the National Trust.

Horticulture and salad produce from greenhouses will be more expensive because growers have had to increase heating.

Many vegetables cannot be harvested because of the wet fields.

In the South and Midlands many orchards have been hit by cold, driving winds which have blown away much of the blossom.

Heavy snowfalls caused chaos in many parts of England and Wales again yesterday, cutting off towns and making motoring dangerous.

As drifts of more than five feet blocked motorways and other major roads the police in most regions reported their busiest weekend of the year. Motoring organisations were kept at full stretch by a stream of emergency calls.

The combination of wind and snow brought down electricity power lines over a wide area of England and Wales. In the East Midlands, telephone lines also collapsed.

A power failure hit the Waltham television transmitter, serving Nottinghamshire and Lincolnshire, for some time yesterday.

The Central Electricity Generating Board said there had been more than 200 faults throughout the country between Friday night and noon yesterday caused by ice, snow and high winds short-circuiting high-voltage power lines.

Supplies in many areas flickered for about a second before other circuits automatically cut in.

Birmingham and East Midlands airports had to close and train services were hit when winds brought down overhead power lines near Rugby.

The gales stranded a 471-ton cargo ship, the Dublin-registered Wegro, 30 yards from the Great Yarmouth seafront where it had been swept ashore by 15 ft waves.

A man of 21 and a boy of 12 were believed to have drowned in a yachting accident near Ilfracombe harbour. A 16-year-old girl, who had also been on board, was winched from icy seas by helicopter.

The weather forecasters say it will remain very cold with rain, sleet or snow over most of Britain today. Temperatures will remain below normal for the time of year on Tuesday and Wednesday.

Moscow backs Poles on farmers

By Christopher Bobinski in Warsaw and David Satter in Moscow

THE POLISH leadership appears to have won approval from the Kremlin for its policy of recognising the right of Poland's farmers to an independent trade union.

The Russians, however, appear increasingly concerned at divisions within the Polish Communist Party.

This emerged yesterday in the wake of the visit to Warsaw by Mr. Mikhail Suslov, the chief Soviet ideologist. The Soviet leadership has been vehemently opposed to such a move until now.

A meeting of the joint committee composed of Solidarity, the Polish independent trade union, and the Government, which is preparing the draft of a new law regulating trade union activity, raised no objection to the inclusion of a point clearly setting out farmer's union rights.

Eighty per cent of Polish land is privately farmed. This has always been criticised by the other East European Communist Parties, and Moscow saw the demand for a private farmers' union in Poland as putting off indefinitely any chance of nationalising the land.

It is evident that the Polish leadership managed to persuade *Mr. Suslov and his colleagues* that the cost of continued opposition to the farmers' demand were too great.

It is thought in Warsaw that Mr. Suslov's main concern was the situation inside the divided Polish Communist Party. The consequences of his visit will only become clear at an important Central Committee meeting on Wednesday.

At the moment, Mr. Stanislaw Kania, the Party leader, is stuck between strong rank-and-file demands to dismiss hardliners from the Politburo and democratise the party, on the one hand, and the Soviet Union's evident fear that such changes *will put the Polish* party beyond the pale of East European Communist orthodoxy, on the other.

The Soviet Union escalated its attacks on reformist elements in the Polish Communist Party at the weekend with a report accusing "revisionist elements" of trying to paralyse the role of the party.

The attack was the most direct yet made on the reform movement in the Polish Communist Party.

The Czechoslovak Communist Party was accused of "revisionism" before the invasion of the country in 1968.

● The agency yesterday accused *Mr. Alexander Haig, U.S. Secretary of State,* of making warlike calls and of crude interference in the internal affairs of Poland.

Civil servants begin five-week disruption of UK air traffic

BY JOHN LLOYD, LABOUR CORRESPONDENT

SEVERE disruption of air traffic at Heathrow and provincial airports is expected this morning as civil servants begin a five-week programme of disruption in the eighth week of *their pay dispute.*

But union leaders believe their most effective weapon is strikes at Inland Revenue and Customs and Excise computer centres, and strikes by local collectors who are normally prompt to demand payment of late bills.

The strikes hit tax revenue and national insurance contributions to the Government.

Today's action by air controllers at the 16 airports controlled by the Civil Aviation Authority has made British Airways cancel nine flights from Heathrow between 0730 and 0830, three flights from *Manchester between 0715 and* 0740, and one flight from Birmingham at 0710.

Flights from Washington, Philadelphia, Miami and Mauritius will be running up to two and a quarter hours late into Heathrow.

British Airways said yesterday that it would not know how many further flights would be cancelled until it was clear how many traffic controllers would turn up for work.

Foreign airlines are making plans to bypass Heathrow and land passengers at airports on the Continent if the action is effective.

Glasgow, Prestwick and Edin*burgh airports will be hit to*morrow as air traffic control staff are withdrawn. Disruption in other airports will continue on a rota basis.

But the effect of action on tax and national insurance contributions is seen as the civil servants' strongest card. Officials estimate the Government lost £900m in PAYE and national insurance contributions last week.

Agreement on training policy sought

BY ALAN PIKE

THE MANPOWER Services Commission will meet tomorrow in an effort to approve a final version of proposals to transform Britain's industrial training arrangements in the next ten *years.*

The commission is the official government-funded body responsible for co-ordinating national manpower policy.

Employers, trade unionists and educational representatives on the commission agree about broad objectives—to introduce more flexible arrangements for apprenticeships and adult retraining, and to provide year-long traineeships for school*leavers who do not continue in* higher education.

However, a commission document setting out how to achieve these objectives has been through several drafts.

The abolition of tradiiional time-based apprenticeships would challenge deeply held shopfloor jealousies. TUC representatives on the commission are *prepared to support the plan,* but insist that the entire training initiative must be adequately financed and underpinned by law.

Important discussions will take place next month on another issue related to training—the Finniston Report on the engineering profession.

The Government has been trying for some months to secure the agreement of the *engineering industry, the pro*fessional institutions and academics on establishing an engineering council to regulate the industry. This is a voluntary version of the powerful, statutory engineering authority proposed by Finniston.

After protracted and inconclusive exchanges Sir Peter Carey, Permanent Secretary at the Industry Department, is to bring the parties together in an attempt to obtain consensus on the proposed council's structure.

Preliminary discussions between the employers and institutions appear to have made some progress. An outstanding point of disagreement, however, concerns the status of people appointed to the council.

The institutions have argued *that council members should* serve as representatives of the organisations nominating them. This view is being resisted by the engineering employer

Benn campaign Continued from Page 1

would have respectively 40 per cent and 30 per cent shares of the vote for the party's leaders.

He did not refer to the constituency party section, which would 30 per cent of the vote, and on which Mr. Benn can count fo r overwhelming support.

But in arguing for a change in the formula, he implicitly acknowledged his lack of confidence in winning sufficient support from the unions, many of which still regard Mr. Healey as the villian of the last Labour Government's 5 per cent pay policy. Mr. Benn is lobbying hard for support amongst them.

Mr. Foot said: "I do not think that it is wise to leave the trade unions with the largest share of the vote. Labour MPs must *have confidence in their* Leader; they cannot have one foisted upon them.

"There will be no victory at the next election if the view of the Parliamentary party is not taken account of, properly and fairly.

"No Leader of the Labour Party can unite the party for effective action and electoral victory by defying the Parliamentary party, just as no Leader can unite the party by defying the conference. A genuine balance between the two must be sustained."

Mr. Foot has been reluctant so far to involve himself too closely in the struggle for the deputy leadership, relying on his closest associates to do much of his lobbying among MPs and unionists.

This insistence that MPs must be left to make up their own minds showed his strong *opposition to the present cam*paign among Mr. Benn's supporters to make MPs more accountable to their constituency parties.

Invoking Left-wing heroes such as Keir Hardie and Aneurin Bevan, he said: "It is because we have had men and women prepared to use their own judgment to state their case even when it is unpopular that the Labour movement has been able to make its broad appeal to the nation."

Mr. Foot went on to make his strongest denunciation yet of the Trotskyist Militant Tendency, which he said was guilty of "infantile Leftism" by trying to pin MPs down to "dogmatic and sectarian" commitments.

"Every member of the party subjected to the pressures of this organisation should test what they advise against the best interests of the party as a whole," he said. "In the 1980s the Labour movement cannot afford such diversions or absurdities."

EEC out to break air fares cartel

By Giles Merritt in Brussels

POWERS AIMED at breaking the high-fares cartel operated by Europe's state-owned airlines are being prepared by the European Commission in Brussels.

Within a month the EEC Commission will examine a draft regulation seeking to cut through the tangle of national and international laws sheltering airlines from the Community's tough competition rules.

It is expected that the proposed regulation prohobiting restrictive practices in civil aviation will then go to the Council of Minister

Senior Commission officials say the thorny political problem of subjecting flag carrying national airlines to greater anti-trust supervision by Brussels will reach the EEC Council of Ministers while it is under Britain's Presidency in the second half of this year.

The draft regulation, under prepartion for about a year, would submit civil aviation to many conditions in Articles 85 and 86 of the Rome Treaty.

These are the powers on fair competition and prevention of abuse of a dominant position.

Perhaps the strongest encouragement to the move is the 1972 ruling by the European Court of Justice that maritime and air transport should not be *exempt from* Community competition rules.

A big gap remains in the proposed civil aviation rules. They do not tackle free access to the market, and Brussels officials suggest that Sir Freddie Laker's efforts to break into internal EEC routes with his highly competitive "no frills" service may not be greatly helped by the proposed regulation.

Lynton McLain writes: Legal action to test the Treaty of Rome articles on fair competition and how they affect civil aviation was started by Laker Airways in the High Court last week.

New UK air service, Page 5

Weather

UK TODAY

Cloudy, with rain, sleet or snow.

London, E. Anglia, E. Midlands, S.E. and Cent. England, Channel Isles
Rain or snow clearing slowly. Max. 5C (41F).

Rest of England, Isle of Man, Wales, S.W. Scotland, Cent. Highlands, Aberdeen, Argyll, N. Ireland
Sunny intervals, wintry showers. Max. 9C (48F).

Rest of Scotland, Orkney, Shetland
Showers or rain. Very cold. Max. 4C (39F).

Outlook:
Rain spreading to most areas.

WORLDWIDE

		Y'day midday °C	°F			Y'day midday °C	°F
Ajaccio	C	15	59	Lisbon	C	12	54
Algiers	C	14	57	Locarno	R	8	46
Amsdm.	R	11	52	London	C	7	45
Athens	C	22	72	L. Ang.†	C	16	61
Bahrain	S	36	97	Luxmbg.	R	3	37
Barclna.	S	16	61	Madrid	C	10	50
Belfast	F	8	46	Majorca	F	14	57
Belgrd.	C	21	70	Malaga	S	17	63
Berlin	S	15	59	Malta	C	24	75
Biarritz	R	10	50	M'chstr	Sl	3	37
Bmghm.	Sn	1	34	Melbne.	F	19	66
Blackpl.	C	5	41	Miami†	C	26	79
Bordx.	T	8	46	Montrl.†	S	7	45
Boulgn.	C	6	43	Milan	R	13	55
Bristol	C	2	36	Moscow	C	8	46
Brussels	R	5	41	Munich	S	19	66
Budpst.	C	18	64	Naples	C	23	73
Cairo	F	31	88	Nwcstl.	C	5	41
Cardiff	Sl	2	36	N York†	S	8	46
Cas'b'ca	F	16	61	Nice	R	10	50
Cape T.	R	13	55	Nicosia	C	22	72
Chicg.†	C	7	45	Oporto	C	13	55
Cologne	C	13	55	Oslo	S	6	43
Cpnhgn.	S	10	50	Paris	C	9	48
Corfu	S	23	73	Perth	C	20	68
Denver†	F	13	55	Prague	S	15	59
Dublin	F	7	45	Rykjvk.	C	5	41
Dbrvnk.	F	20	68	Rhodes	S	22	72
Ednbgh.	C	7	45	Rome	C	21	70
Faro	S	15	59	Salzbrg.	F	19	66
Florence	R	14	57	S'cisco†	C	8	46
Frankft.	C	18	64	Singapr.	C	32	90
Funchal	C	16	61	Stckhm.	F	9	48
Genova	Sl	3	37	Strasbg.	C	8	46
Gibrltr.	S	16	61	Sydney	F	20	68
Gl'sg'w	C	6	43	Tangier	S	16	61
G'rnsey	C	7	45	Tel Aviv	S	22	72
Helsinki	F	5	41	Tenerife	F	22	72
H. Kong	C	24	75	Tokyo	S	11	52
Innsbrk.	F	15	59	T'r'nto†	C	3	37
Invrnss.	F	6	43	Tunis	F	20	68
I.o.Man.	F	5	41	Valencia	S	16	61
Istanbul	S	19	66	Venice	C	16	61
Jersey	R	4	39	Vienna	F	13	55
Jo'burg	C	19	66	Warsaw	F	9	48
L. Plms.	F	20	68	Zurich	C	11	52

C—Cloudy, F—Fair, R—Rain, S—Sunny, Sl—Sleet, Sn—Snow, T—Thunder.
† Noon GMT temperatures.

PM plans export drive to Gulf and India

BY RICHARD EVANS, LOBBY EDITOR

THE PRIME MINISTER intends to forge closer links between the Government, major manufacturers and banks to stimulate an export drive to areas such as India and the Gulf. This follows her *11-day visit* to five countries, completed on Saturday.

Mrs. Thatcher will have talks with the Confederation of British Industry and companies having the potential to increase exports. This is intended to capitalise on what she regards as a breakthrough at the political level, particularly in Saudi Arabia, the United Arab Emirates and Qatar.

UK companies have lost business heavily, in comparison with West German, Japanese and French, since the withdrawal of British forces from the Gulf region in 1971. But the Prime Minister clearly believes there is a crucial opportunity for this trend to be reversed.

The welcome she received showed her Britain was politically and commercially favoured, and the signs are that she is prepared to back a much more aggressive approach in competition with the UK's Western partners, especially France, to sell a wide range of goods, including military hardware, to the oil-rich Gulf states.

The most important achievement of her visit was probably the clearing of any political barriers to trade. The next stage, after her discussions with industry, will be to seek to meet any financing or administrative problems that handicap com*panies anxious to break into* the lucrative but highly competitive Gulf market.

Immediately after her four-day visit to India at the start of her tour, Mrs. Thatcher asked *her officials to draft* a report on the most effective follow-up measures. The same action has been taken on Saudi Arabia and the Gulf.

In Qatar, where the largest gas field in the world has yet to be exploited, the Prime Minister lent her influence to the British Petroleum attempt to secure the consultancy contract for the field's development. The contract, which could be worth £200m, is also being sought by U.S. and Dutch companies.

Before leaving, Mrs. Thatcher said she had achieved her two main objectives — to demonstrate the UK's continuing interest in this area of immense *strategic and political signifi*cance, and to stress the contribution which British industry, commerce and technology could make to the development of the huge natural resources of the Gulf states.

In Saudi Arabia, a deal could soon be clinched for the building of two hospitals worth a total of £250m, and Ministry of Defence teams are demonstrating armoured vehicles to the Saudis.

The sale of British Aerospace's Hawk trainer aircraft to Abu Dhabi could be followed by sales to Dubai and Saudi Arabia.

A question mark over the visit is how far Mrs. Thatcher will feel obliged to go to meet the major preoccupation of the states of the Gulf region—peace in the Arab-Israeli conflict and a settlement which favours the Palestinians.

Part of the price for increased British influence and better trade prospects could be an even firmer commitment to sponsor the Palestinian Liberation Organisation as one of the principal Arab partners in *future* Middle East negotiations.

Heavy pressure was exerted by Saudi leaders and Gulf sheikhs for Britain to play a leading peace-seeking role when it takes over the European Community Presidency in the second half of the year.

The talks between Mrs. Thatcher and Mrs. Ghandi, Prime Minister of India, were much less satisfactory. The best that could be said was that each learned more of the formidable qualities of the other. There was certainly no meeting of minds.

However, Government officials believe the British consortium led by Davy and the British Steel Corporation is well in line for the contract for a steel works.

Schmidt begins Saudi mission, Page 2; Why W. Germy needs UK, Lombard, Page 12

THE LEX COLUMN

Why 30 at 600 can overshadow 750

For a day or two the City's *sheer delight at seeing the* FT 30-Share Index arrive at 600—when it does—will enable investors to forget about inflation and bask in the nominal glow of an All-time High. But the performance of this index remains extremely pedestrian—both in real terms, adjusted for inflation, and compared with the more broadly based FT-Actuaries All-Share Index.

The All-Share has been on a more or less unbroken upward trend since 1976—and its rise can be traced back to the mid-1960s. The 30-Share, meanwhile, has until the last few weeks been scaling the same rather modest peaks again and again.

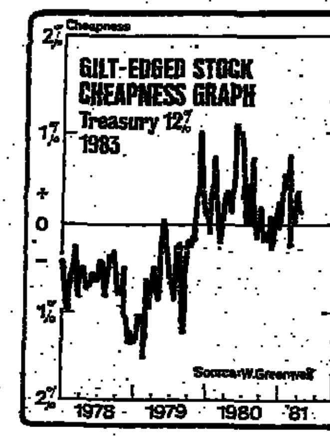
In terms of what it was designed to do, the 30-Share has been a thoroughly successful index. It was set up as an easily calculated indicator of the short-term ups and downs of the share prices of British *industry. But as a long-term* index of the progress of the whole equity market is has inevitable limitations.

It can be argued that the general concentration on the FT Index as a measure of the long-term performance of the equity market has been thoroughly bad for the market's image among the general public. Much the same can be said for the Dow Jones Industrial Average in the U.S. British private investors naturally conclude that, since the 30-Share Index reached 500 a dozen years ago, share prices have been going nowhere for a very long time.

One explanation of the underperformance—though not the most important one—is the heavy concentration of the index on manufacturing industry which, taken as a whole, has had a sad time in the last few years. *The 30-share* list contains no financials, no mining houses, no properties and, until BP was introduced, it included no oils.

The more important influence is, however, an arithmetical one, for the method by which the index is calculated gives it a small but cumulative downward bias. It is a geometric index, rather than being arithmetical like the All-Share: *that is to say, the constituent* share prices, suitably adjusted, are multiplied together and the thirtieth root is taken.

Sharp downward movements in prices of individutl constituents have a disproportionate effect. To take an extreme example, if the index consisted of two stocks, both at 100, and one were to fall to zero, the index would fall to zero too—not to 50. If one were to rise to 200, the index would rise not



to 150, but to 141.

Share prices, on the whole, do not drop to zero, though some blue chips have gone quite close in the 1970s. *Changes in the composition* of the index are infrequent, in order to preserve the maximum of continuity, but companies do tend to be removed from the list when their prices are very low—as with Rolls-Royce, Alfred Herbert and British Leyland. If a share is removed when it has fallen from 100 to 20, the share of the company which replaces it effectively enters the index at 20, and has to rise by 400 per cent to restore the index to where it was.

Brokers Phillips and Drew have calculated that it is this effect, rather than the emphasis on heavy industrials, that is mostly to blame for the poor performance of the FT Index against the All-Share, which is a weighted arithmetical index designed to mirror long-term portfolio performance (but which is cumbersome to calculate).

It is sometimes suggested that the All-Share should be promoted in place of the 30-Share, and indeed advances in data processing technology have made it possible to consider calculating it more than once a day. But there are still serious *problems in trying to collect* 750 prices at a particular point in time—especially when many of the constituent shares are dealt in much less frequently than the Thirty. Meantime, the 30-Share Index is simply much better known. The topping of 300 by the All-Share last year was ignored outside the City columns, but 600 on the 30-Share can be relied upon to make News at Ten.

Gilt-edged model

W. Greenwell's new gilt-edged analysis service has just gone "live," and the brokers claim that assessments of the likely performance of an individual stock are now possible *with a degree of clarity which* has not been possible before.

The service is based upon Greenwell's three-dimensional model for gilt-edged prices. Although such models are not new, this one is claimed to be superior to some others in that it can cope with the marked distortion or "curvature" shown by the market at the short end where major groups of investors have widely different tax constraints.

Moreover the analysis has been developed in several pioneering ways. In particular the model has made it possible to generate price histories for stocks on the basis that their *term to redemption is constant* instead of reducing over time. This has simplified the data to allow hitherto hidden patterns to emerge. Shifts in the market's valuation of stocks with particular coupons and terms *can therefore be more easily* monitored, and Greenwell have introduced stock cheapness graphs for every redeemable gilt-edged stock with a term of a year or longer.

The stock cheapness graph plots the percentage deviation in the stock's price from the surface of the three-dimensional model. When the deviation is, say, 1 per cent there may be opportunities for *anomaly switching.*

Greenwell's service comes, however, with appropriate warnings. Some deviations may be permanent, because the model does not allow for certain quirks of individual gilt stocks (such as the fact that on some of them interest is paid free of tax to non-residents).

The brokers argue that the real advantage of the new *service is that it will make it* possible to analyse the com*ponents in the projected return* from a gilt-edged stock. Thus the return will be affected by any change in the general level of interest rates, by the change in the shape of the market surface, and by any change in the position of the stock relative to the surface. If an investor has ideas about how interest rates and the surface are likely *to move, he will now be better* able to pick the stock likely to give the highest return in those circumstances.

At the moment the model is not indicating any great opportunities. The market is fitting the model remarkably closely, and anomalies are few. But in quiet times that is to be anticipated. It is during a major market movement that the system can be expected to throw up some bargains.